



SUPPLEMENT  
TO THE

**Government Gazette,**  
THE UNITED PROVINCES OF AGRA AND OUDH.

ALLAHABAD, SATURDAY, MARCH 5, 1932.

**PART IV.**

Curriculum for the Lower Middle Section of Vernacular  
Schools for Girls, United Provinces, for 1932-33.

**SUBJECTS OF STUDY.**

**Compulsory Subjects.—**

1. Hindi or Urdu.
2. Arithmetic.
3. History.
4. Geography.
5. Domestic Science.

**Optional Subjects.—**

One of the following:—

1. Classical Language.
2. Second Vernacular.
3. English.
4. Advanced course in Hindi or Urdu.
5. Gardening with Nature Study.
6. Drawing.
7. Music.

**NOTE.**—The Vernacular Middle Examination of 1933 will be set on the curriculum prescribed for 1931-32.



**Curriculum for the Lower Middle Section of Vernacular  
Schools for Girls, United Provinces, for 1932-33.**

**HINDI OR URDU.**

**CLASSES V AND VI.**

*(Two years Course.)*

**(a) Reading.**

For text-books see appendix 1(d).

**(b) Grammar—Revision of previous work.**

Kinds of nouns and remaining cases.

Kinds of pronouns and all cases.

Kinds of adjectives.

Person, number, remaining tenses and voice of verbs.

Remaining parts of speech.

Parsing.

Analysis and synthesis of a simple sentence.

For text-books see appendix I(a).

**(c) Translation or paraphrase into modern idiomatic prose from  
standard authors not read in the class.**

**(d) Composition.**—To write narratives and descriptions.

To write letters with modern forms of address.

NOTE.—Emphasis should be laid on the choice of suitable words and phrases.

**ARITHMETIC.**

**CLASSES V AND VI.**

*(Two years Course.)*

Revision of past work with more difficult problems. The four simple rules in decimal fractions (excluding recurring decimals) and their application in simple problems. More advanced examples of simple interest. Table of square measure and simple problems in area. Proportion. Oral exercises on all the rules learnt.

For books see appendix I(b).

**HISTORY.**

**CLASSES V AND VI.**

*(Two years Course.)*

Stories relating to the following should be studied in classes V and VI. In class V some ten to fifteen outstanding stories should be selected from throughout Indian History :—

1. The Ramayana.
2. The Mahabharat.
3. Chandragupta and Asoka.

4. Vikramaditya and Kali Das.
5. Harsha.
6. Mahmud of Ghazni.
7. Prithwiraj, Alha and Udal.
8. Altamash.
9. Razia Begum.
10. Nasir-ud-din.
11. Ferozshah Tughlak.
12. Babar.
13. Sher Shah.
14. Ahilya Bai.
15. Chand Bibi.
16. Akbar, Rana Partab, Man Singh, Birbal, Todar Mal, Faizi, Abul Fazl.
17. Nur Jahan.
18. Shahjahan, Taj Mahal.
19. Aurangzeb, Shivaji, Guru Govind Singh.
20. Zaibunnissa.
21. Ranjit Singh.
22. Raja Ram Mohan Rai.
23. Sir Saiyid Ahmad Khan.
24. Dadabhai.
25. Gokhale.
26. Victoria.
27. George V.

For books of reference see appendix I(c).

### GEOGRAPHY.

#### CLASSES V AND VI.

(Two years Course.)

*India*.—Revision of work of class IV.

Reading of the physical map of India (colouring scale, measurement of distance); the climate of the different regions of India; the life and occupations of the people; products; principal railway routes.

*Asia*.—Reading of the physical map of Asia. A brief description of the chief regions of Asia (Tundras, forest belt, grass lands, table lands, coast lands, deserts, islands); their climate and products; life and occupations of the people with special reference to the use man has

made of his environment; trade routes. (The names of only a few of the most important rivers and mountains should be taught.)

The names and position of the countries of Asia and their most important towns.

Physical Geography—Causes of day and night, changes of season; eclipses.

For books see appendix I(d).

## DOMESTIC SCIENCE.

### (a) Physiology and Hygiene.

#### CLASSES V AND VI.

(Two years Course.)

*Class V.*—A very simple description of (1) the skeleton; (2) the organs of digestion and excretion; (3) the heart and its work; (4) the lungs and their work; (5) the skin and its pores. Need of personal cleanliness (skin, mouth, teeth, eyes and ears). Cleanliness of clothes, beds, house and cooking vessels. Value of fresh air and means of ventilation. Need of variety in food; rules for eating. Water, the usual sources of contamination and the means of securing pure water. The need for exercise and sleep.

*Class VI.*—Revision of work previously done. Simple rules for the care of the sick, arrangement of the room, rest and food. Precautions against sore-eyes, malaria, cholera, small-pox, plague, tuberculosis and other infectious diseases. Use of disinfectants. Treatment of cuts, burns, scalds, sprains, colds. Simple rules for care of small children and infants—sleep, bathing, clothing and feeding—foreign bodies in eyes, nose, ears, and throat, precautions against convulsions.

For text-book see appendix I(e).

### (b) Sewing.

#### CLASSES V AND VI.

(Two years Course.)

Practice in stitches already learnt. Tucking and pleating.

To cut out and make up four garments one to be taken from each of the following sections :—

- (1) Kurta.
- (2) Waistcoat, shaluka, frock.
- (3) Petticoat, pyjama.
- (4) Shirt.

Practice in cutting out in paper garments of different sizes.

Knitting socks.

*Optional.*—Chikan work or other forms of embroidery.

(c) Cooking (optional).

CLASSES V AND VI.

(Two years Course.)

Cooking of tarkari, puri, khir, halwa.

Cooking of two of following :—

Parata, kachauri, plau, kabab.

Preparation of salads.

Cooking of food for invalids—sago, khichri, arrowroot halwa, barley water.

Optional-cooking of two kinds of sweetmeats.

(d) Spinning (optional).

CLASS V.

To spin yarn of 16 to 30 counts.

To find counts.

Revision.

CLASS VI.

To spin yarn of 16 to 30 counts.

To distinguish between good and bad cotton and yarn.

To keep account of spinning and carding.

Book recommended. Charkha Shastra (Satyagrah Ashram, Sabar-mati; Ahmedabad).

OPTIONAL SUBJECTS.

One of the following Classical Languages.

CLASSES V AND VI.

(Two years Course.)

(d) One of the following classical languages :—Sanskrit, Persian, Arabic.

*Courses in Classical Languages.*

*Reading and conversation.*—To read with correct pronunciation and fluency from a reader. To use the words of the reader in simple sentences.

*Writing.*—Writing to dictation or transcription.

*Grammar and composition.*—Only those conjugations and declensions to be learnt which have very commonly been used in the text-book.

To form sentences with the help of the vocabulary of the reader.  
For text-book see appendix I(f).

## Second Vernacular Hindi or Urdu.

### CLASSES V AND VI.

(a) Reading.—To read accurately at sight from the text-book. To explain the meanings of words and sentences, and to answer questions on the subject matter of the reader.

(b) Writing.—To write sentences from the book to dictation in the Urdu or Nagri character. Copy slips should be used.

For text-books see appendix I(g).

### ENGLISH.

#### CLASS V.

*Conversation and reading.*—The early stages of instruction will be mainly oral, and should include systematic training in the sounds of spoken English in connexion with the pronunciation of easy words. By the end of the year the class should be able to carry on simple conversation about familiar objects and actions.

To read with correct pronunciation an easy primer, to render into the Vernacular easy sentences from the primer, to use the words of the primer in simple sentences and to answer in English simple questions based on the matter in the primer.

*Spelling and writing.*—To spell the words of the primer; copy-writing in ruled books of easy familiar words, writing in copy-books (in the latter half of the course); dictation in ruled books of words and sentences previously read in the primer.

#### CLASS VI.

*Conversation and reading.*—To converse about common objects and actions, to read with correct pronunciation from a reader, to render into Vernacular easy sentences from the reader, to use the words of the reader in simple sentences and to answer in English simple questions based on the matter in the reader.

*Spelling and writing.*—To spell the words of the reader; dictation in ruled books of words and sentences previously read in the reader; writing in copy-books.

*Grammar and composition.*—Formal grammar should be commenced; division of a sentence into two parts: subject and predicate. To point out nouns, pronouns, adjectives and verbs (without sub-classifications). Oral and written exercises in the above.

Easy written composition (at least once a week), e.g., completion of sentences. Easy written composition from the Vernacular into English idiomatic sentences (at least once a week).

For text-books see appendix I(h).

## ADVANCED COURSE IN HINDI OR URDU.

For text-books see appendix I(i).

### Gardening with Nature Study.

#### CLASS V.

*Gardening.*—Preparing beds, planting seeds and watching growth; periodical cleaning; regular watering; keeping a garden calendar.

*Plant life.*—Previous knowledge of plant life to be summed up with reference to plants growing in the plots; seeds studied in detail with reference to structure, food storage, etc.; conditions of germination with experiments; stems and leaves; adaptation of plants to their surroundings.

#### CLASS VI.

*Gardening.*—Origin of soil (from rocks by decomposition); textures (sand, silt, and clay); power of absorption and retention of moisture; need of cultivation and drainage in agriculture; need of manure, vegetative propagation (cuttings, grafting, underground runners); practical work on the foregoing to be done in the plots.

Examination of different kinds of soil and separation of soluble and insoluble parts.

*Plant life.*—Work of roots, leaves and flowers in detail; tree studies; time of flowering and fruiting; bark and stem.

*Museum work.*—Preservation of leaves, fruits, seeds, butterflies and other specimens of plant and animal life.

#### List of experiments in Nature Study including gardening.

#### CLASS VI.

##### *Evaporation and condensation.*

1. Observation of natural evaporation of water; evaporation by boiling.
2. Condense water vapour on a cold surface.
3. Observation of natural condensation in the form of clouds and rain; in the form of dew. Breath during hot and cold weather. Steam from an engine.
4. Test the purity of water from various sources by evaporating and noting the residue.
5. Obtain pure water from a salt solution, well water or other water by distillation.
6. Evaporate distilled water to see if there is any residue.

##### *Soil.*

7. Separation of soluble and insoluble portions of soil by decantation and filtration.

8. Find the amount of soluble matter by evaporation of the filtrate.

9. Separation of insoluble part of soil into particles of various sizes by flotation.

10. Comparison of the water-holding capacity of different soils (by adding equal amounts of water to equal amounts of different soils. and measuring the amount of water that drains off from each; or by allowing the wetted samples to dry naturally).

11. Observation of various kinds of soil in the field. [This connects directly with section (b) Gardening of class VI.]

Book recommended for the use of teachers :—

Vigyan Praveshika *منهاج الفنون* (Vernacular Science Society, Allahabad). zamindar aur uske dushman kire, Part I, published by Messrs. Uttam Chand Kapoor and sons, Anarkali, Lahore.

### DRAWING.

(Course prescribed for classes V and VI in the Curriculum for Vernacular Schools for Girls for 1929-30 should be followed until a course is drawn up).

### MUSIC.

#### CLASS V.

1. Students should be given an idea of Chatasra jati layakari.

2. Students should be able to distinguish and understand the signs of Sam, Tali and Rawali and also be able to distinguish Shudh, Tivara and Komal Swar.

3. Students should be taught the Bol of Theka of Tal already learnt, and also should be able to count Tal with hand.

4. Students should be taught to play on any of the instruments besides Tabla (for example, Harmonium, Dilruba, Violin, Israj, etc.), and should play on them the songs already learnt in previous years, beginning first with easy song.

5. The following songs of the Rag given below should be taught :—

<i>Rag.</i>	<i>Song.</i>
(1) Kalyan	... Tero hi dhyān dharat.
(2) Bhupali	... Apno nij pad.

#### CLASS VI.

1. The following songs of the undermentioned Rag are to be taught :—

<i>Rag.</i>	<i>Song.</i>
(1) Jaijai wanti	(i) Shyam sumer se .. (ii) Sham gay so.
(2) Kedara ..	(i) Saras sis .. (ii) Tarana.
(3) Kamod ..	(i) Gore badan .. (ii) Jane na dungi.
(4) Bahar (kaura)	(i) Kaisi niksi .. (ii) Tarana.
(5) Malkans ..	(i) Aye Raghubir .. (ii) Adyasmār.

2. The instruments should be taught as in Class V.

For books and instructions to teachers see appendix II.

APPENDIX I(A).

Text-books for Hindi and Urdu.

CLASSES V AND VI.

(Two years Course.)

The text-books prescribed are :—

*Urdu*.—Lower Middle Girls' Reader, by M. B. Hill, Indian Press, Allahabad (Re. 1-1); or

Ruh-i-Adab, Part I, by Ghasi Ram, M.A., published by Vidya Printing Press, Meerut. (8 annas).

Ruh-i-Adab, Part II, by Ghasi Ram, M.A., published by Vidya Printing Press, Meerut. (8 annas).

or

Lower Middle Reader for Girls, Parts I and II, published by the Newal Kishore Press, Lucknow. (6 annas 6 pies each.)

*Hindi*.—Lower Middle Girls' Reader, by M. B. Hill, Indian Press, Allahabad (13 annas); or

Hindi Sar Sangrah, Parts II and III, by Kali Das Kapoor, published by Agarwala Press, Allahabad, (annas 6 Part II, annas 8 Part III).

or

Lower Middle Reader for Girls, Parts I and II, published by the Newal Kishore Press, Lucknow. (6 annas 3 pies each.)

Recommended for Supplementary reading :—

CLASS V.

*Urdu*.—Panchtantra Ke Qisse, 1915 edition published by Longmans Green & Co., 6 Old Court House Street, Calcutta. (3 annas 6 pies).

or

Ganjina-i-Akhlaq, Part I, by Pir Ghulam Dastgir Nami, 1929 edition, published by Talib Ali Paband Qureshi, Proprietor, Akhbar Talim, Lahore. (9 annas).

*Hindi*.—Devi Draupdi, by Ram Charit Upadhyaya, 2nd edition, published by Ganga Pustakmala Karyalaya, 29/30, Aminabad Park, Lucknow. (8 annas).

or

Nari Charitra Mala by Chaturvedi Dwarka Prasad Sharma, 2nd edition (1924), published by Newal Kishore Press, Lucknow. (10 annas).

## CLASS VI.

*Urdu*.—Akbar Badshah, by Khan Bahadur Saiyid Maqbul Shah, B.A., I.E.S., and Moolraj, B.A., B.T., published by Macmillan & Co., Ltd., Calcutta. (5 annas).

or

*Ganjina-i-Akhlaq*, Part I, by Pir Ghulam Dastgir Nami, 1929 edition, published by Talib Ali Paband Qureshi, Proprietor, Akhbar Talim, Lahore. (9 annas).

*Hindi*.—Pativrata, by Janardan Jha, published by Indian Press, Ltd., Allahabad. (8 annas).

or

*Sahitya Prasoon*, Part II, by Mahendra, 3rd edition (1930) published by University Book Dépôt, Agra. (8 annas).

Books recommended for teachers' use :—

Junior Course of Urdu Composition or Ibtidai Muzmun Nawisi, by Shaikh Khadim Mohi Uddin, 3rd English Master, Central Training College, Lahore. (8 annas.)

*Shabab-i-Urdu* (a monthly magazine), by Khan Ahmad Husain Khan, "The Shabab-i-Urdu," Lahore, published by Khan Nazir Ahmad Khan, Lahore. (Annual subscription, Rs. 5; six-monthly Rs. 3; single copy, 9 annas.)

*Hindi Rachna Chandrodaya*, Parts I and II, by Ram Lochan Sharan, 1st edition. Hindi Pustak Bhandra, Laheria Sarai, Darbhanga. (Part I, 15 annas; Part II, Re. 1-2.) (If both the parts are purchased at a time the price will be Rs. 2.)

*Fitrat-i-Atfal*, translated by Maulvi Hamid Hasan of Cawnpore, published by the All-India Muslim Educational Committee, Aligarh, (4 annas.)

Akbar Allahabadi, by Talib Allahabadi, published by Jafri Brothers Anwar Ahmadi Press, Allahabad. (Special edition Rs. 5. Ordinary edition Rs. 3 annas 8).

Anuwad aur Vyakhya, by Ram Ratna, published by Ratna Ashram, Agra. (8 annas.)

*Hindi Rachna Probodh*, by Ram Ratna. (Re. 1.)

*Hindi Sahitya Suman*, Part II, by Hira Lal Sharma, published by D. J. Book Dépôt, Jodhpur. (10 annas.)

*Hindi Composition*, by Ganga Prasad, Head Master, D. A. V. High School, Allahabad, published by Rai Sahib Ram Dayal Agarwal, Allahabad. (12 annas.)

Abadul Mazamin, Part I, by Maulvi Ahmad, published by Anwar Ahmadi Press, Allahabad, 1st edition. (Re. 1.)

The following dictionaries are recommended for use of teachers and girls :—

Shabdarth Paryat Kosh. Publisher Ram Narain Lal, Allahabad.  
Rs. 3.

Gutka Hindi Kosh. Publisher Ram Narain Lal, Allahabad.  
Re. 1-8.

Hindi Shabda Kalpadrum. Ram Dayal Agarwala, Allahabad.  
Rs. 3.

*Patriotic poems.*

**Classes V and VI.**

The following books containing patriotic poems are recommended for class use in schools :—

*Hindi :—*

1. Swadesh Gan, Part III (on cream wove) for classes V and VI, of Vernacular Schools, published by the Bhargava School Book Dépôt, Lucknow, (6 pies.)

2. Swadesh Gan, Part III (on white printing) for classes V and VI, of Vernacular Schools, published by the Bhargava School Book Dépôt, Lucknow, (5 pies.)

3. Bharat Gan, Part III (coloured cover without illustrations) for classes V and VI, of Vernacular Schools, published by the Standard Press, Allahabad, (9 pies.)

4. Swadesh Sangit, Part III (with cover on art paper with notes and illustrations) for classes V and VI, of Vernacular Schools, published by the Indian Press, Allahabad, (1 anna 6 pies.)

5. Swadesh Sangit, Part III (with 60 lb. cover and without illustration and notes) for classes V and VI, of Vernacular Schools, published by the Indian Press, Allahabad, (9 pies.)

6. Swadesh Prem, Part III (illustrated) for classes V and VI, of Vernacular Schools, published by Rai Sahib Lala Ram Dayal Agarwala, Allahabad, (9 pies.)

7. Swadesh Prem, Part III (unillustrated) for classes V and VI, of Vernacular Schools, published by Rai Sahib Lala Ram Dayal Agarwala, Allahabad, (6 pies.)

8. Hindustani Bachchon ke Gane, Part III (with illustrations on ivory finish paper and cover in one colour) for classes V and VI, of Vernacular Schools, published by the Hindustani Book Dépôt, Lucknow, (1 anna.)

9. Hindustani Bachchon ke Gane, Part III (with illustrations on art paper and coloured border on each page and two-coloured title) for classes V and VI, of Vernacular Schools, published by the Hindustani Book Dépôt, Lucknow, (1 anna 6 pies.)
10. Desh ke Git, Part III for classes V and VI of Vernacular Schools, published by the Shishu Press, Allahabad, (9 pies.)
11. Swadeshi Gan, Part III for classes V and VI of Vernacular Schools, published by the Saraswati Publishing House, Agra, (1 anna.)
12. Swadesh Gitawali, Part III for classes V and VI of Vernacular Schools, published by the Newal Kishore Press, Lucknow, (1 anna.)
13. Hindustani Git, Part III for classes V and VI of Vernacular Schools, published by the School Book and Apparatus Dépôt, Lucknow, (1 anna.)
14. Patriotic Poems in Hindi, Part III for classes V and VI of Vernacular Schools, published by P. C. Dwadesh Shreni and Co., Aligarh, (4 pies.)
15. Desh Bandana, Part III for classes V and VI of Vernacular Schools, published by Agarwal Brothers and Co., Allahabad, (6 pies.)
16. Rashtri Gan, Part III (Cheap edition) for classes V, VI and VII of Vernacular Schools, published by Gautama Brothers and Co., Cawnpore (9 pies.)
17. Rashtri Gan, Part III (picture edition) for classes V, VI and VII of Vernacular Schools, published by Gautama Brothers and Co., Cawnpore, (1 anna. 3 pies.)

*Urdu :—*

1. Watan ki Yad, Part III for classes V, VI and VII of Vernacular Schools, published by the Newal Kishore Press, Lucknow, (1 anna.)
2. Patriotic Poems, Part III for classes V, VI and VII of Vernacular Schools, published by Lala Ram Narain Lal, Allahabad, (1 anna.)
3. Watan ke Rag, Part III (illustrated for classes V, VI and VII of Vernacular Schools, published by the Indian Press, Allahabad, (1 anna 6 pies.)
4. Watan ke Rag, Part III (unillustrated) for classes V, VI and VII, of Vernacular Schools, published by the Indian Press, Allahabad, (1 anna.)
5. Watan ke Git, Part III for classes V, VI and VII of Vernacular Schools, published by the Saraswati Publishing House, Agra, (1 anna.)

6. Tarana-i-Watan, Part III (coloured cover with illustrations) for classes V, VI and VII of Vernacular Schools, published by the Standard Press, Allahabad. (9 pies.)

7. Patriotic Poems in Urdu, Part III for classes V, VI and VII of Vernacular Schools, published by P. C. Dwadesh Shreni and Co., Aligarh. (9 pies.)

8. Hubb-i-Watan in Urdu, Part III (illustrated) for classes V, VI and VII of Vernacular Schools, published by Rai Sahib Lala Ram Dayal Agarwala, Allahabad. (9 pies.)

9. Hubb-i-Watan in Urdu, Part III (unillustrated) for classes V, VI and VII of Vernacular Schools, published by Rai Sahib Lala Ram Dayal Agarwala, Allahabad. (6 pies.)

10. Watan ke Git, Part III for classes V, VI and VII of Vernacular Schools, published by the Shishu Press, Allahabad. (9 pies.)

11. Sarod-i-Watan, Part III (picture edition), for classes V, VI and VII, of Vernacular Schools, published by Gautama Brothers and Co., Cawnpore. (1 anna three pies.)

12. Sarod-i-Watan, Part III (cheap edition), for classes V, VI and VII, of Vernacular Schools, published by Gautama Brothers and Co., Cawnpore. (9 pies.)

13. Watan ka Tarana, Part III, for classes V, VI and VII, of Vernacular Schools, published by the Bhargava Book Agency, Allahabad, (1 anna.)

GRAMMAR—CLASSES V AND VI.

Urdu.—Risala-i-Qawaid-i-Urdu, Parts I (1 anna 3 pies) and II (3 annas 9 pies.)

or

Tahzib-ul-Qawaid, Part II, by M. H. S. Jalal-ud-din Ahmad Jafri, published by the Indian Press, Ltd., Allahabad. (5 annas.)

or

Qawaid-i-Urdu, Part II, by Maulvi Jamal-ud-din Haidar, published by Ram Dayal Agarwala, Allahabad, 1925 edition. (6 annas.)

or

Dastur-i-Urdu, Part I. by Azhar Husain Faruqi, published by Nand Kishore & Brothers, Benares. (2 annas 6 pies.)

or

*Hindi*.—Bhasha Vyakaran, by Chandra Mauli Shukul, published by the Indian Press, Allahabad. (4 annas.)

or

Hindi Middle Vyakaran. (4 annas 9 pies.)

or

Madhyamik Vyakaran, by Ram Ratan Adhyapak, published by the Hindi Press, Allahabad. (8 annas.)

or

Hindi Vyakaran, Part I, for classes V and VI of A.-V. and Vernacular schools for boys and girls, by Ganga Prasad, Head Master, D. A. V. High School, Allahabad, published by Ram Dayal Agarwala, Publisher and Bookseller, 184, Katra Road, Allahabad. (7 annas.)

or

Madhya Hindi Vyakaran, by Kamta Prasad Guru, published by the Indian Press, Ltd., Allahabad, 6th edition. (8 annas.)

Books recommended for teachers' use :—

Urdu Grammar, Parts I and II, by Muhammad Ismail, published by Munshi Muhammad Aslam Saife, Meerut. (Part I, 2 annas; Part II, 5 annas.)

Rachna Vidhi, Part I, by Ajodhya Nath Sharma, M.A., and Ganga Prasad Shukul, M.A., published by Nand Kishore & Brothers, Benares. (7 annas.)

Rachna Vidhi, Part II, by Deoki Nandan Sharma, M.A., published by Nand Kishore & Brothers, Banares. (10 annas.)

Bal Vyakaran, by Ajodhianath Sharma, M.A., and Ram Behari Shukul, M.A., published by Nand Kishore & Brothers, Benares. (4 annas.)

First English Grammar, by R. S. Weir, M.A., I.E.S., published by Ram Narain Lal, Katra, Allahabad. (4 annas.)

Adbhut Sansar, Part II, by Munshi Lal Agarwala, published by Macmillan & Co., Calcutta. (12 annas.)

Madhya Hindi Rachana by Kamta Prasad, Guru published by Ram Narain Lal, Katra, Allahabad. (8 annas.)

Shiksha Vidhi (Art of teaching), by Gopi Lal Mathur, B.A., C.T., published by Pram Hans Lal Mathur, Narhi, Hazratganj, Lucknow. (Re. 1 annas 8.)

APPENDIX I(B).

Text-books for Arithmetic.

*Classes V and VI.*—Girls' Lower Middle Arithmetic (Urdu or Hindi), Macmillan & Co. (Urdu, 6 annas; Hindi, 5 annas.)

or

Girls' Lower Middle Arithmetic (Urdu or Hindi), by K. C. Bhattacharya, Indian Press Ltd., Allahabad. (11 annas each.)

APPENDIX I(C).

*Books recommended for reference in History.*

Easy stories from Indian History (Hindi or Urdu), published by Macmillan & Co. (Urdu, Re. 1-4; Hindi, Re. 1.)

Hind ke Hirae, by Sital Din Dwivedi, 1928 edition, published by the Hindi Press, Allahabad. (Re. 1.)

- Bahaduran-i-Tarikh-i-Hind, or Bhartiya Itihas ke Nayak. Hindustani Publishing House.

Bhartiya Itihas ke Kuchh Ratna or Hind ke Chand Sartaj, by Jaideo Singh and Amir Chand Mehra, published by the City Book House, Meston Road, Cawnpore. (Re. 1 each.)

Bharat Ke Saput (Heroes of India), revised and improved edition, by Suraj Narain Mathur, published by Rai Sahib Lala Ram Dayal Agarwala, Allahabad. (Re. 1.)

Hind Ke Jan Nisar (Heroes of India), revised and improved edition, by Suraj Narain Mathur, published by Rai Sahib Ram Dayal Agarwala, Allahabad. (Re. 1.)

Bhratiya Itihas ki Kahaniyan, revised edition, by Kali Das Kapoor, M.A., L.T., published by Newal Kishore Press, Lucknow. (12 annas.)

Hindustan ki Tarikh Kahaniyan, revised edition, by Kali Das Kapoor, M.A., L.T., published by Newal Kishore Press, Lucknow. (14 annas.)

## APPENDIX I(D).

## Text-books in Geography.

*Urdu*.—National Press ka Vernacular School Jugrafia, Parts II and III, by Munshi Lal Agarwala, published by the National Press, Allahabad. (Part II, 8 annas; Part III, 7 annas.)

or

Vernacular School Jugrafia, Parts II and III, revised 1930 edition, by Madan Lal Jain, published by Macmillan & Co., Calcutta. (Part II, 9 annas; Part III, 10 annas.)

or

*Hindi*.—National Press ka Vernacular School Bhugol, Parts II and III, by Munshi Lal Agarwala, published by the National Press, Allahabad. (Part II, 8 annas; Part III, 7 annas.)

or

Vernacular School Bhugol, Parts II and III, revised 1930 edition, by Madan Lal Jain, published by Macmillan & Co., Calcutta. (Part II, 6 annas; Part III, 8 annas.)

or

Longman's Vernacular School Jughraphia, Part II (revised edition Urdu and Hindi), by H. B. Wetherill, M.A., published by Messrs. Longmans Green & Co. (9 annas each.)

or

Longman's Vernacular School Jughraphia, Part III (revised edition) (Urdu and Hindi), by H. B. Wetherill, M.A., published by Messrs. Longmans Green & Co. (9 annas each.)

*Recommended for the use of pupils.*

Longman's Indian Atlas in Hindi, published by Longmans Green & Co., Ltd., 6, Old Court House, Street, Calcutta. (12 annas.)

Books recommended for teachers' use :—

Middle Class Geography, Parts I and II in one volume, in Urdu, for Standard V, by E. Marsden, Macmillan & Co. (10 annas.)

Middle Class Geography, Part III, in Urdu, for Standard VI, by E. Marsden, Macmillan & Co. (13 annas 6 pies.)

Middle School Geography, Eurasia, for Standard V, in Urdu, by C. Morrison, Macmillan & Co. (8 annas.)

Middle School Geography for Standard VI, Africa, Australia and the New World, in Urdu, by C. Morrison, Macmillan & Co. (Re. 1.)

Middle Class Geography, Parts I and II in one volume, in Hindi, for Standard V, by E. Marsden, Macmillan & Co. (10 annas.)

Middle Class Geography, Part III, in Hindi, for Standard VI, by E. Marsden, Macmillan & Co. (10 annas 6 pies.)

Middle School Geography, Eurasia, for Standard V, in Hindi, by C. Morrison, Macmillan & Co. (10 annas.)

Middle School Geography for Standard VI, Africa. Australia and the New World, in Hindi, by C. Morrison, Macmillan & Co. (Re. 1 and annas 4.)

Longman's Vernacular School Geography, Part II. Longmans, Green & Co., Calcutta. (10 annas.)

Indian Press ke Naye Jugraphion ka silsila, Parts II and III, (in Hindi and Urdu). Indian Press, Allahabad. Part II, 9 annas; Part III, 10 annas.)

Bahar-i-Jugraphia or Bhugol Vinod, Parts II and III, published by Rai Sahib Ram Dayal Agarwala, Allahabad. (9 annas each.)

Jugraphia-i-Hindustan in Urdu, by Ram Narain Misra, published by Bhugol Karyalaya, Allahabad. (Rs. 2.)

Bharat Varsh Ka Bhugol, by Ram Narain Misra, published by Bhugol Karyalaya, Allahabad. (Rs. 2.)

## APPENDIX I(E).

*Books recommended in Domestic Science.*

*Text-book.*—Shahrah-i-Tandurusti (Urdu or Hindi) Gulab Singh and Sons, Lahore. (Urdu—4 annas 1 pie, Hindi—4 annas 2 pies.)

Books recommended for reference.

Hindustani Gharon men Timardari in Urdu (Indian Home Nursing), by Dr. Major Muhammad Abdul Hakim, State Surgeon, Rampur. (Rs. 3.)

Tandurusti ki Pahli Kitab, by Col. J. W. D. Megaw, Indian Red Cross Society, Viceregal Lodge, Delhi. (12 annas.)

Swastha Raksha ke Prathmic Niyama (the Hindi version of Col. J. W. D. Megaw's First Laws of Health), Indian Red Cross Society, Viceregal Lodge, Delhi. (12 annas.)

Sehat ki Kahani, by E. Marsden, B.A., translated into Urdu by Munshi Abid Husain Faridi, published by Macmillan & Co. (Re. 1.)

Hindi translation of the Land of Health and the Land of Wealth, by Pandit Ram Narain Misra, published by Macmillan & Co. (Re. 1.)

Arogya Dig Darshan, by Mahatma Mohan Das Karam Chand Gandhi, published by Narayan Dat Sahgul & Sons, Booksellers, Lahore, (Urdu) 1st edition. (12 annas.)

Lower Swasth, by Sriyut Bimal, Narvadeshwar Pustakalaya, Babura, Shahabad. 1925 edition. (2 annas.)

Jeonar, by Shrimati Satyawati Dwivedi Gajpuri. Hindi Pustak Agency, 126, Harrison Road, Calcutta. (5 annas.)

Bachcha (The Child). A Book of Domestic Science in Hindi, by Captain M. A. Quraishi, I.M.S., translated into Hindi by Karam Narayan Bahl, Professor, Muir Central College, Allahabad. (Re. 1.)

Risal-i-Parhezgari (Manual of Temperance), revised edition, by Munshi Mewa Ram, B.A., late Inspector of Schools, Jhansi division. (4 annas.)

Sanyam Shiksha (Manual of Temperance), revised edition, by Munshi Mewa Ram, B.A., late Inspector of Schools, Jhansi division. (4 annas.)

Nari Ratna in Hindi, by the wife of the late Pandit Chandra Bhal Bajpai, Taluqdar, Kardaha Estate, district Unao.

Arogya Dig Darshan, by Mahatma Mohan Das Karam Chand Gandhi, translated by Bishambhar Sahai Premi, Meerut. (Hindi.) (6 annas.)

Garhasthya Shastra, by Pandit Lakshmi Dhar Bajpai. 2nd edition. Published by Taran Granthawali Karyalaya, Daraganj, Allahabad. (Re. 1.)

Silai Darpan, or Silai ki Kitab, Part I (Hindi and Urdu). Published by Rai Sahib Ram Dayal Agarwala, Allahabad. (Rs. 2.)

Swasthya aur Dirghayu, by A. C. Selmon, M.D., published by Oriental Watchman Publishing House, Salisbury Park, Poona. (Rs. 5 cloth binding, Rs. 6, Keratol.)

Home Nursing, by Lady Petric and Dr. Ruth Young, M.B.E., W.M.S., published by St. John Ambulance Association, Indian Council. (12 annas.)

Bimaron ke Khane, by Muhtarima Amina Nazli, published by Raziqul Khair, Editor, Asmat, The Asmat Office, Delhi. (10 annas.)

APPENDIX I(F).

Text-books in Classical Languages.

CLASSES V AND VI.

*Sanskrit.*—(1) Sanskrit Reader, Part I, by Pandit Sarda Prasad Bhattacharya. (Ram Narain Lal, Allahabad, annas 5.)

or

(2) Snskrit Reader and Grammar, Part I. (Ram Narain Lal, Allahabad, annas 6.)

*Persian.*—Persian Course for First Middle Class (1917). Revised copy. Class V, pages 1—40, Class VI, pages 41—68 and Persian Middle Course, pages 1—25.

*Grammar.*—Class V, Zubdatul Masadir. Class VI, Dasturi Farsi, Part I.

*Arabic.*—Arabic ki pahli kitab, Class V, pages 1—39; Class VI, pages 40—84.

*Grammar.*—Kitabus Sarf, Class V, pages 1—32; Class VI, pages 33—90; Kitabun Nahv, Class VI, pages 1—15.

APPENDIX I(G).

Text-books in Second Vernacular.

CLASS V.

*Urdu*.—First half of Lower Primary Girls' Reader, by M. B. Hill, Indian Press, Ltd., Allahabad (8 annas); or Bal Chandrika, Part I, by Vinapani, published by the Hindi Press, Allahabad, 1928 edition. (Inferior quality of paper, 3 annas; superior quality of paper, 3 annas 6 pies.)

or

Lower Primary Reader for Girls, Part I, published by the Newal Kishore Press, Lucknow. (3 annas 9 pies.)

*Hindi*.—First half of Lower Primary Girls' Reader, by M. B. Hill, Indian Press, Ltd., Allahabad (8 annas); or Bal Chandrika, Part I by Vinapani, published by the Hindi Press, Allahabad, 1928 edition (Inferior, 3 annas; superior, 3 annas 6 pies.)

or

Lower Primary Reader for Girls, Part I, published by the Newal Kishore Press, Lucknow. (3 annas 6 pies.)

CLASS VI.

*Urdu*.—Second half of Lower Primary Girls' Reader, by M. B. Hill, Indian Press, Ltd., Allahabad. (8 annas.)

or

Bal Chandrika, Part II, by Vinapani, published by the Hindi Press, Allahabad, 1928 edition. (Inferior quality of paper, 4 annas; superior quality of paper, 4 annas 6 pies.)

or

Lower Primary Reader for Girls, Part II, published by the Newal Kishore Press, Lucknow. (4 annas.)

*Hindi*.—Second half of Lower Primary Girls' Reader, by M. B. Hill, Indian Press, Ltd., Allahabad. (8 annas.)

or

Bal Chandrika, Part II, by Vinapani, published by the Hindi Press, Allahabad, 1928 edition. (Inferior, 4 annas; superior, 4 annas 6 pies.)

or

Lower Primary Reader for Girls, Part II, published by the Newal Kishore Press, Lucknow. (4 annas.)

APPENDIX I(H).

Text-books in English.

CLASS V.

King Primer, published by Macmillan & Co., Calcutta. (5 annas.)

*or*

Conversational Readers :—

First Primer, published by Macmillan & Co., Calcutta. (2 annas)  
and Second Primer (3 annas).

First Direct Method English Reader (Tipping) published by Macmillan & Co., Calcutta. (5 annas).

*or*

Primer, by P. C. Wren, published by K. and T. Cooper, Bombay. (6 annas.) (The Indian Class Readers series.)

Teacher's handbook to the Primer, by P. C. Wren (for teachers' use only).

CLASS VI.

Modern Indian Readers, Book I, published by Macmillan & Co., Calcutta. (5 annas.)

*or*

Second Direct Method English Reader, published by Macmillan & Co., Calcutta. (8 annas.)

*or*

Reader I, by P. C. Wren, published by K. and T. Cooper, Bombay. (7 annas.)

Teachers' handbook to Reader I (for teachers' use only).

APPENDIX I (I).

**Text-books for advanced language course.**

*Urdu :—*

Shigufa-i-Adab, Part III, by Naim-ur-Rahman, published by the Indian Press, Ltd., Allahabad, price annas 5.

*or*

Tobatul-Nasuh, by Dr. Nazir Ahmad, published by the National Press, Allahabad, price annas 12.

*or*

Manazir-i-Qudrat, Part I, by Muhammad Illias Barni, published by the Institute Press, Aligarh, price Re. 1.

*or*

Jazbat-i-Fitrat, Part III, by Muhammad Illias Barni, published by the Institute Press, Aligarh, price Re. 1.

*Hindi :—*

Satya Harish Chandra, edited by Jiwan Shankar and Kedar Nath Bhatt, published by Ram Narain Lal, Bookseller, Allahabad, price annas 6.

*or*

Sapta Saroj, by Prem Chand, published by Hindi Pustak Agency, 126, Harrison Road, Calcutta, price annas 8.

*or*

Maurya Vijaya, by Siya Ram Saran Gupta, published by Sahitya Sadan, Chirgaon, Jhansi, price annas 4.

APPENDIX II.

General Directions for Teachers.

*Theory.*

1. A student must study the Rag with special attention to Jati, Barjswar and Aroh, Awaroh.
2. Students are expected to have all information about Tal Matra and Bibhag (bars).

*Practical.*

3. Students should be able to sing a song in Bilampit, Madya and Drut laya, and should also be able to sing Alap of the Rag learnt.
4. Students must be able to sing groups of Swar with proper attention to timing, written on blackboard.
5. Students are expected to demonstrate practically Tal learnt in the standard.

The following books are recommended :—

- (1) Balodaya Sangit, Parts 1 and 2.
- (2) Sangit Bal Prakash, Parts 1, 2 and 3.
- (3) Sangit Bal Bodh, Parts 1, 2, 3 and 4.
- (4) Sangit Tatva Darshak.
- (5) Ankit Alankar.
- (6) Mahila Sangit, Parts 1 and 2.

Additional books recommended for teachers and students :—

(a) For Classes I to IV :—

- (1) Balodaya Sangit, Parts 1 and 2.
- (2) Mahila Sangit, Parts 1 and 2.
- (3) Bal Prakash, Parts 1 and 2.
- (4) Bhartiya Sangit Lekhan Padhati.
- (5) Ankit Alankar.

(b) For Classes V to VIII :—

- (1) Sangit Balprakash, Part III.
- (2) Sangit Balbodh, Parts 1, 2, 3 and 4.
- (3) Sangit Tatvadarshak.

Published by  
Gandharva Maha-  
vidyalaya, Panch-  
wati, Nasik.

A. H. MACKENZIE, M.A., C.I.E.,  
Director of Public Instruction,  
United Provinces.

ALLAHABAD :  
February 29, 1932.

## Curriculum for Preparatory and Primary Sections of Vernacular Schools for Girls, United Provinces, for 1932-33.

The following instructions on the teaching of hygiene in primary classes should be carefully observed by teachers :—

It is the duty of the teacher to train her pupils in habits of cleanliness and order. She should therefore see that they are clean and neat when they come to class, and should require them to keep their books tidy and clean and to help her in keeping the class-room orderly. Formal lessons on hygiene should not be given till class III, but the teachers should endeavour by example and precept to impress on the children's minds simple rules on the following matters :—

Cleanliness of the person, clothes, house, food, milk and water.

Need of fresh air.

Dangers from spitting.

Disposal of refuse.

Protection against flies and mosquitoes (for Upper Primary only).

Food and eating (e.g., eat slowly, eat at regular intervals, avoid excess of spices).

Importance of rest and sleep.

Care of the eyes and ears.

Books for teachers' reference, see Appendix I (c).

### PREPARATORY SECTION.

#### A.—Infant class.

1. **Reading.**—To read simple characters and easy words and sentences at sight.

NOTE.—The teacher should use charts and should also show on the blackboard how letters are formed.

The children should practise word-building by means of card board letters, etc.

The charts and primers approved for use are given in Appendix I(a).

2. **Conversation.**—Simple conversation about pictures and about familiar objects and actions, especially those mentioned in the primer.

The children should illustrate the conversation by imitative movements and play and should sing action songs.

3. **Writing.**—To copy on *takhtis* simple characters and easy monosyllables from the blackboard and from headlines written on *takhtis* by the teacher or from printed writing slips; also to write them to dictation.

NOTE.—At the beginning the children should practise forming the characters in sand and clay, and later on with chalk on *takhtis*, before they begin to write with pens on *takhtis*.

4. **Arithmetic.**—Notation and numeration from 1 to 50 to be taught by means of concrete objects. Oral addition and subtraction

of numbers whose sum does not exceed 20 in connexion with concrete objects.

5. **Handwork:—**

- (1) *Sewing*.—Tucking and running with large needles and coloured thread. To make a duster, handkerchief, etc., for dolls.
  - (2) *Claywork*.—Modelling of very simple objects in clay, e.g., ball, belan, chulha, patra.
  - (3) The teacher, with the approval of the Inspectress, may introduce other forms of suitable handwork, e.g., paper-folding, drawing in chalk on *takhtis*, making garlands of paper, or flowers, paper plaiting, etc.
6. **Physical Exercises**.—Simple movements to time and games.

**B.—Infant class.**

1. **Reading**.—To read sentences at sight from the text-book, to know the meanings of words, and to answer questions on the subject matter of the reader.

For text-books see Appendix I(a).

2. **Conversation**.—As in class A.

*Story telling*.—The teacher to tell or read simple stories to the class and to ask questions on them.

3. **Writing**.—To copy and also to write to dictation sentences from the text-book in Urdu or Nagri character. *Takhtis* to be used.

4. **Arithmetic**.—Class B. Notation and numeration to 999 to be taught by means of concrete objects. Simple addition and subtraction of numbers; answers not to exceed three figures. Construction and memorising of tables up to  $5 \times 10$ .

**NOTE**.—Problems should be worked as soon as a new rule is taught, or a table learnt.

5. **Handwork:—**

- (1) *Sewing*.—Running, hemming, back-stitching, making a pillow, quilt or mattress, etc., for dolls. Optional—Tepehi stitch in chikan work.
  - (2) *Claywork*.—Modelling of simple objects in clay, e.g., simple household utensils.
  - (3) The teacher, with the approval of the Inspectress, may introduce other forms of handwork, e.g., paper-cutting, straw work, drawing in chalk on *takhtis*, paper toys, cardboard work, making chicks for dolls' houses.
6. **Physical Exercises**.—Simple movements to time and games.

## LOWER PRIMARY SECTION.

## CLASS I.

1. **Reading.**—To read accurately at sight from the text-book, to explain the meanings of words and sentences, and to answer questions on the subject-matter of the reader.

**Recitation.**

The text-books prescribed are given in Appendix I(a).

2. **Story telling.**—The teacher to tell or read simple stories to the class and ask questions on them.

3. **Oral composition.**—The pupils to repeat simple stories in their own words, and to carry on conversation about pictures or their own experiences. They should be trained to use complete sentences.

4. **Writing.**—To write on *takhtis* sentences to dictation from the text-book in Urdu or Nagri character. Copy-slips should be used. [See Appendix I(a).]

5. **Arithmetic.**—Notation and numeration to lakhs. The four simple rules; no answer to exceed five figures. Construction and memorising of tables up to  $10 \times 10$ .

Simple, oral and written problems on the above.

Oral drill in addition and subtraction and in the tables.

NOTE.—Short division only should be taught and the divisor should not be greater than 9. For books see appendix I(b).

6. **Geography.**—Where there are facilities descriptive lessons should be given on the life of children in other parts of India and in other countries, e.g., Arabia, Greenland, Japan.

7. **Sewing.**—Practice in running, hemming and back stitching, top sewing, making a bag, cap, cloth toys, etc.

8. **Handwork:—**

(1) Claywork, modelling of simple fruits and vegetables.

(2) Spinning (optional)—

Takli spinning and hanking.

Count of yard should be 5 to 15.

(3) Other forms (optional) which the conditions of the neighbourhood render suitable, e.g., Straw work, chains, garlands etc.

9. **Physical Exercises.**—Exercises of the arms, legs and body.

10. **Cooking (optional).**—Cleaning rice and dal, cooking roti, cleaning dishes.

11. **Music (optional).**—For course see Appendix II.

12. **Object Lessons.**—Where there are facilities and their introduction is approved by the Circle Inspectress. For course see Appendix II.

## CLASS II.

1. **Reading.**—To read accurately at sight from the text-book; to explain the meanings of words and sentences; and to answer questions on the subject-matter of the reader. Recitation.

For text-books see Appendix I(a).

2. **Composition:—**

*Oral.*—As in I.

*Written.*—To write simple statements about their own experiences or about pictures or objects they have studied; to write short answers to questions on stories they have read or heard.

3. **Writing.**—To write sentences to dictation from the text-book in Urdu or Nagri character. Copy-slips should be used.

For copy-slips see Appendix I(a).

4. **Arithmetic.**—Revision. Notation and numeration to crores.

Construction and memorising of tables up to  $16 \times 10$ . The tables of Indian money and of weight (maund, seer, chhatak) and linear measure (yards, feet, inches and of yards, giras) with exercises in reduction. The four compound rules with miscellaneous problems. (Terms with many digits should not be used.)

For books see Appendix I(b).

5. **Geography.**—Where there are facilities descriptive lessons should be given on the life of children in Burma, Ceylon, China, Africa, Holland, England.

Meaning and use of a map to be taught by means of a plan of school houses and compound.

*Direction.*—East, West, North, South.

Description of village or town in which the school is situated with special emphasis on the main physical features and supplemented by the study of a large scale map. Occupations of the people and products.

6. **Sewing.**—Practice in stitches already learnt. Run and fell; darning stitch on untorn material. Making a basta or plain pillow case; making dolls' clothes and cloth dolls.

Knitting with two needles (plain).

*Optional.*—Easy stitches in chikan work: Hem-stitching. Any form of embroidery usual in the neighbourhood of the school. Crochet (chain stitch).

7. **Handwork:—**

(a) Spinning(optional).

Spinning on charkha.

Count of yarn should be 8 to 12.

Fitting of charkha and hanking of yarn.

(b) Other forms of handwork which the conditions of the neighbourhood make suitable, e.g., straw work, baskets, making picture books.

8. **Physical Exercises.**—Exercises of the arms, legs and body.

9. **Cooking** (optional).—Practice in cooking roti, preparation of vegetables, masala, chutnies.

10. **Music** (optional) for course see Appendix II.

11. **Object Lessons.**—Where there are facilities and their introduction is approved by the Circle Inspectress. For course see Appendix II.

### UPPER PRIMARY SECTION.

#### CLASS III.

##### **Hindi or Urdu :—**

(a) *Reading.*—To read at sight from the text-book; to explain the words and sentences; and to give the substance of lessons in their own words. Recitation.

(b) *Grammar.*—The following is a two years' course for classes III and IV :—

To distinguish nouns, pronouns, adjectives, verbs and adverbs.

Gender, number and case (nominative and objective cases only) of nouns.

Transitive and Intransitive verbs. Three main tenses of verbs.

(c) *Composition.*—To write short stories and descriptions, and to write letters (including letters of invitation) with short and simple forms of address.

(d) *Writing.*—To write passages to dictation from the text-book or from books of equal difficulty in Urdu or Nagri character. Copy-slips to be shown.

For text-books and copy-slips see Appendix I(a).

2. **Arithmetic.**—Revision Tables of time and linear measure (mile furlong, yards, feet, inches) with application in simple problems. Domestic accounts. Factors and L. C. M. by factors. Simple idea of vulgar fractions with small denominators. Fractions of concrete quantities. Reduction of fractions. Aliquot parts and their use in simple calculations. Oral and written problems on all the rules learnt.

For books see Appendix I(b).

3. **Geography.**—*District.*—Rivers; hills; canals; mountains (if any); large villages and qasbas, products and occupations of people; means of communication. Position of district in the map of the province.

*Province.*—Physical features; mountains; rivers (Ganges, Jumna and Ghagra with their larger tributaries). A brief description of the life

and occupations of the people in different parts of the province. Products. Towns, (Allahabad, Benares, Cawnpore, Agra, Lucknow, Muttra, Hardwar, Fyzabad). Means of communication. Position of the province in the map of India.

4. **Sewing.**—Practice in stitches already learnt. Sewing on buttons tapes and loops; button-hole stitch; darning a hole; gathering and setting in. Making an easy garment (pyjama or petticoat). Practice in cutting out pyjama or petticoat in paper. Knitting with two needles (plain and purl).

Optional :—

Embroidery.

5. **Hygiene.**—For syllabus see appendix I (c).

6. **Physical Exercises.**—Exercises of arms, legs and body.

7. **Spinning (optional).**—Count of yarn should be 10 to 16.

Carding and slivering.

8. **Cooking (optional).**—Cooking of dal (one kind) cooking of vegetable (one kind) cooking of semai, preparation of simple chutnies and sharbat, cleaning and polishing of vessels, disposal of rubbish, cleanliness and tidiness of kitchen.

9. **Music (optional).**—For course see Appendix II.

10. **Object Lessons.**—Where there are facilities and their introduction is approved by the Circle Inspectress. For course see Appendix II.

#### CLASS IV.

**Hindi or Urdu :—**

(a) *Reading.*—To read at sight from the text-book and to explain words, allusions, and sentences. To summarise the subject-matter of the lessons in their own words. Recitation.

(b) *Grammar.*—See course under class III.

(c) *Composition.*—To write short stories and descriptions, and to write letters (including letters of invitation) with short and simple form of address.

(d) *Writing.*—To write passages to dictation from a book of equal difficulty with the text-book in Urdu or Nagri character. Copy-slips to be shown.

For text-books and copy-slips see Appendix I(a).

2. **Arithmetic.**—Revision. The four simple rules in fractions (only easy examples introducing fractions with small denominators must be given). Oral and written miscellaneous problems on all the rules learnt in Classes I to IV.

Solution of problems by the unitary method.

Elementary examples of simple interest.

For books see Appendix I(b).

3. **Geography.**—India. The natural divisions of India (the northern mountains, the northern plain with its chief rivers and canals, the Deccan tableland with its chief rivers).

Description of the climate of northern India; the monsoon; products of northern India; the life and occupations of the people of northern India.

The provinces with their chief towns. The larger Indian States with their capitals.

*World.*—Shape of the earth. Position and names of continents and of countries mentioned in the Urdu or Hindi readers. Position of India.

Where there are facilities more detailed instruction should be given on condensation, evaporation and rainfall in connexion with the monsoon, and on the causes of the variations of climate in India.

Books and maps recommended for teachers' use :—

National Press, Vernacular School Jughraphia Part I, (Urdu) by Munshi Lal Agarwala, published by National Press, Allahabad (annas 5.)

National Press, Vernacular School Bhugol, Part I, (Hindi) by Munshi Lal Agarwala, published by National Press Allahabad. (annas 5. Vernacular School Geography, Part I, in Urdu and Hindi, by Madan Lal Jain, M.A., L.T., published by Macmillan and Co., Calcutta. (Urdu 8 annas Hindu 6 (annas) (New edition, 1929).

Anglo-Vernacular School Geography Part I in Urdu and Hindi by Madan Lal Jain, M.A., L.T., published by Macmillan & Co., Ltd., Calcutta. (Urdu edition 6 annas, Hindi edition 5 annas.)

Jughaphia-i-Jadid Part I, (Urdu) and Navin Bhugol Pratham Pustak, by Munshi Lal Agarwala, published by Macmillan & Co., Ltd., Calcutta. (Urdu edition 12 annas, Hindi edition, 10 annas.)

Wall map of United Provinces of Agra and Oudh (in Urdu and Hindi combined) 1930 edition, by Girdhar Lal, Pacheli, published by the Manager, Nandan Trading Co., Agra. (Rupees 3.) (Improved edition.)

Wall map of United Provinces of Agra and Oudh (in Urdu and Hindi) published by the Indian Press, Ltd., Allahabad. (Rupees 3.) (Improved edition.)

Bhugol Pathan Pranali, by Thakur Jagdeo Singh, 'Visharad', published by Dr. Indradeo Prasad, Shastri, Tirtharag Press, Allahabad. (8 annas.)

4. **Sewing.**—Practice in stitches previously learnt. Patching. Button-holes. Marking clothes with name.

To cut out and make up a kurta and pyjama for a woman or a small boy. Practice in cutting out kurtas and pyjamas in paper.

Knitting on four needles (plain and purl). Making a bag or topi.

Optional :—

(a) Chikan work, or other forms of embroidery. Crochet.

5. **Hygiene.**—Cleanliness of the person—(hair, skin, teeth, care of eyes and ears).

Clothing—how clothing is soiled, change of clothing, care of clothes and shoes in the different seasons.

Cleanliness of rooms, furniture, bedding, cooking utensils, surroundings of the house, directions for sweeping and dusting a room, how to dispose of refuse and dirty water. The need for exercise, recreation and sleep, correct posture.

The value of fresh air—how air is made impure, how to keep the air in a room fresh, correct breathing. Value of sunlight.

Water and milk—the usual sources of contamination and the means of securing pure water and milk.

Treatment of cuts, burns and scalds, sore eyes.

NOTE.—The teaching throughout should be as practical as possible.

For syllabus and books see Appendix I(c).

6. **Physical Exercises.**—Exercises with wands and light dumb-bells.

7. **Spinning** (*optional*).

Count of yarn should be 12 to 20.

Revision.

Straightening of spindle.

8. **Cooking** (*optional*).—Cooking of dal (different kinds), khichri, bhujia and rice.

9. **Music** (*optional*).—For course see Appendix II.

10. **Object Lessons.**—Where there are facilities and their introduction is approved by the Circle Inspectress. For course see Appendix II.

## APPENDIX I(a).

## TEXT-BOOKS FOR HINDI AND URDU.

## Readers.

## Preparatory Section Infant class A.

The charts and primers approved for use are—

*Urdu.*—Urdu chart no. I (illustrated) showing simple letters (price Re. 1-12), Indian Press, Allahabad. Urdu chart (unillustrated) showing simple letters in thick type (price Re. 1, Gulab Singh and Sons, Lahore. Urdu Chart no. II (unillustrated) showing simple and compound letters (price Ré. 1), Indian Press, Allahabad. Urdu chart no. III (unillustrated) showing combination of vowels (price Re. 1).

or

Asan Urdu Primer I, by Daya Shankar Dube and Zamin Ali, published by the Indian Press, Ltd., Allahabad. (1 anna 6 pies.)

or

Bachchon ki Pahli Kitab, by Khan Bahadur Idris Ahmad and Adhyapak Ram Ratan, published by the Hindustani Book Dépôt, Lucknow. (Finish paper 2 annas 6 pies, Pictures on Art paper 3 annas). (Cheaper edition, 1 anna 6 pies.)

or

Urdu Primer, Part I, by Ram Shankar Shukul, "Rasal" and Ajaz Husain, published by Lala Ram Narain Lal, Katra, Allahabad. (1 anna 6 pies.)

or

Urdu ka Jadid Qaida, by Shaikh Ali Jawad, B.A., published by Shaikh Ali Jawad, B.A., Lecturer, Muslim University Intermediate College, Aligarh. (1 annas 6 pies.)

or

Urdu ki Jadid Kitab, by Shaikh Ali Jawad, B.A., Published by Shaikh Ali Jawad, B.A., Lecturer, Muslim University Intermediate College, Aligarh. (2 annas 6 pies.)

or

*Hindi* :—

Bal Bodh Primer I, by Daya Shankar Dube, published by the Indian Press, Ltd., Allahabad. (1 anna 6 pies.)

or

Pahli Bal Pothi, by Sahitya Ratna Ayodhya Singh Upadhyaya and Adhyapak Ram Ratan, published by the Hindustani Book Dépôt, Lucknow. (Finish paper 2 annas 6 pies, Pictures on Art paper 3 annas.) (Cheaper edition, 1 anna 6 pies.)

or

Bal Shiksha Primer, by Krishna Kant Malviya, published by Sri Raj Narain Suri, Chowk Ganga Das, Allahabad. (1 anna 6 pies.)

or

Bal Vikas Primer I, by Ram Shankar Shukul "Rasal" and Ajaz Husain, published by Lala Ram Narain Lal, Katra, Allahabad. (1 anna 6 pies.)

**Infant class B.**

*Urdu :—*

Asan Urdu Primer II, by Daya Shankar Dube and Zamin Ali, published by the Indian Press, Ltd., Allahabad. (1 anna 6 pies.)

or

Bachchon ki Dusri Kitab, by Khan Bahdur Idris Ahmad and Adhyapak Ram Ratan, published by the Hindustani Book Dépôt, Lucknow. (2 annas.) (Cheaper edition, 1 anna 6 pies.)

or

Urdu Primer, Part II, by Ram Shankar Shukul, "Rasal" and Ajaz Husain, published by Lala Ram Narain Lal, Katra, Allahabad. (1 anna 6 pies.)

or

Urdu ka Jadid Qaida, by Shaikh Ali Jawad, B.A., published by Shaikh Ali Jawad, B.A., Lecturer, Muslim University Intermediate College, Aligarh. (1 anna 6 pies.)

or

Urdu ki Jadid Kitab, by Shaikh Ali Jawad, B.A., published by Shaikh Ali Jawad, B.A., Lecturer, Muslim University Intermediate College, Aligarh. (2 annas 6 pies.)

*Hindi :—*

Bal Bodh Primer II, by Daya Shankar Dube, published by the Indian Press, Ltd., Allahabad. (1 anna 6 pies.)

or

Dusri Bal Pothi, by Sahitya Ratna Ayodhya Singh Upadhyaya and Adhyapak Ram Ratan, published by the Hindustani Book Dépôt, Lucknow. (2 annas 9 pies.) (Cheaper edition, 1 anna 6 pies.)

or

Bal Shiksha, Part I, by Krishna Kant Malviya and Asghar Husain, published by Sri Raj Narain Suri, Chowk Ganga Das, Allahabad. (1 anna 6 pies.)

or

Bal Vikas Primer II, by Ram Shankar Shukul "Rasal" and Ajaz Husain, published by Lala Ram Narain Lal, Katra, Allahabad. (1 anna 6 pies.)

LOWER PRIMARY SECTION.

CLASS I.

The text-books prescribed are—

*Urdu*.—First half of Lower Primary Girls' Reader, by M. B. Hill, Indian Press, Allahabad. (8 annas.)

or

Bal Chandrika, Part I, by Vinapani, published by the Hindi Press, Allahabad, 1928 edition. Inferior quality of paper—3 annas; superior quality of paper—(3 annas 6 pies.)

or

Lower Primary Reader for Girls, Part I, published by the Newal Kishore Press, Lucknow. (3 annas 9 pies.)

*Hindi*.—First half of Lower Primary Girls' Reader, by M. B. Hill, Indian Press, Allahabad. (8 annas.)

or

Bal Chandrika Part I, by Vinapani, published by the Hindi Press, Allahabad, 1928 edition.

(Inferior—3 annas; superior.—3 annas 6 pies.)

or

Lower Primary Reader for Girls, Part I, published by the Newal Kishore Press, Lucknow. (3 annas 6 pies.)

Recitation.

*Urdu* :—

Chaman-i-Nazm, by Abul Hasan Haidari, published by Bhargava Agency, Allahabad. (1 anna 6 pies.)

or

Hindustani Naghme, by K. B. Muhammad Idris Ahmad, published by Hindustani Book Dépôt, Lucknow. (1 anna.)

*Hindi*.—Vinod, by Mannan Dwivedi Gajpuri, published by Lala Ram Narain Lal, publisher, Allahabad. (2 annas.)

or

Balika Gan, by Beni Prasad Agarwala, published by Lala Ram Narain Lal, Publisher and Bookseller, Allahabad. (1 anna.)

or

Bal Kabitawali, (Revised edition) by Sri Narain Chaturvedi, M.A., published by School Book and Apparatus Dépôt, 406, Fatehganj Lucknow. (1 anna 6 pies.)

or

Achche Git, for classes I and II, by Pandit Ajodhya Singh Upadhyaya, Professor, Benares Hindi University. (1 anna.)

CLASS II.

The text-books prescribed are—

*Urdu*.—Second half of Lower Primary Girls' Reader, by M. B. Hill, Indian Press, Allahabad. (8 annas.)

or

Bal Chandrika, Part II, by Vinapani, published by the Hindi Press, Allahabad, 1928 edition. (Inferior quality of paper 4 annas : Superior quality of paper, 4 annas 6 pies.)

or

Lower Primary Reader for Girls, Part II, published by the Newal Kishore Press, Lucknow. (4 annas 6 pies.)

*Hindi*.—Second half of Lower Primary Girls' Reader, by M. B. Hill, Indian Press, Allahabad. (8 annas.)

or

Bal Chandrika, Part II, by Vinapani, published by the Hindi Press, Allahabad, 1928 edition. (Inferior 4 annas; superior 2 annas 6 pies.)

or

Lower Primary Reader for Girls, Part II, published by the Newal Kishore Press, Lucknow. (4 annas.)

Recitation.

*Urdu*.—Guldasta, Part I, by Muhammad Rafiq, published by Kamta Prasad Agarwala, Bookseller and Publisher, Chowk, Allahabad. (1 anna 6 pies.)

or

Chaman-i-Nazm, by Abul Hasan Haidari, published by Bhargava Book Agency, Allahabad. (1 anna 6 pies.)

or

Hindustani Naghme, by K. B. Muhammad Idris Ahmad, published by Hindustani Book Dépôt, Lucknow. (1 anna.)

*Hindi*.—Praveshika Padyawali, Part II, by Ram Shankar Shukul, published by the Bhargava Book Agency, Allahabad. (1 anna 6 pies.)

or

Vinod, by Mannan Dwivedi Gajpuri, published by Lala Ram Narain Lal, Publisher, Allahabad. (2 annas.)

or

Balika Gan, by Beni Prasad Agarwala, published by Lala Ram Narain Lal, Publisher and Bookseller, Allahabad. (1 anna.)

or

Acche Git, for classes I and II, by Pandit Ajodhya Singh Upadhyaya, Professor, Benares Hindi University. (1 anna.)

CLASS III.

The text-books prescribed are—

*Urdu*.—First half of Upper Primary Girls' Reader, by M. B. Hill, Indian Press, Allahabad. (9 annas.)

or

Bal Chandrika, Part III, by Vinapani, published by the Hindi Press, Allahabad, 1928 edition. (Inferior quality of paper—5 annas; superior quality of paper—5 annas 6 pies.)

or

Upper Primary Reader for Girls for class III, published by the Newal Kishore Press, Lucknow. (4 annas 9 pies.)

*Hindi*.—First half of Upper Primary Girls' Reader, by M. B. Hill, Indian Press, Allahabad. (9 annas.)

or

Bal Chandrika, Part III, by Vinapani, published by the Hindi Press, Allahabad, 1928 edition. (Inferior—5 annas; superior—5 annas 6 pies.)

or

Upper Primary Reader for Girls for class III, published by the Newal Kishore Press, Lucknow. (4 annas 6 pies.)

Recitation.

*Urdu*.—Guldasta, Part I, by Muhammad Rafiq, published by Kamta Prasad Agarwala, Bookseller and Publisher, Chowk, Allahabad. (1 anna 6 pies.)

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CLASS IV.

The text-books prescribed are—

*Urdu*.—Second half of Upper Primary Girls' Reader, by M. B. Hill, Indian Press, Allahabad. (9 annas.)

or

Bal Chandrika, Part IV, by Vinapani, published by the Hindi Press, Allahabad, 1928 edition. (Inferior quality of paper—5 annas; superior quality of paper—5 annas 6 pies.)

or

Upper Primary Reader for Girls for Class IV, published by the Newal Kishore Press, Lucknow. (4 annas 6 pies.)

*Hindi*.—Second half of Upper Primary Girls, Reader, by M. B. Hill, Indian Press, Allahabad. (9 annas.)

or

Bal Chandrika, Part IV, by Vinapani, published by the Hindi Press, Allahabad, 1928 edition. (Inferior—5 annas; superior—5 annas 6 pies.)

or

Upper Primary Reader for Girls for Class IV, published by the Newal Kishore Press, Lucknow. (4 annas 3 pies.)

*Patriotic poems.*

**Classes I to IV.**

The following books containing patriotic poems are recommended for class use in schools:—

**HINDI.**

1. Swadesh Gan, Parts I and II (on cream wove) for Classes I, and II and III and IV of Vernacular Schools, respectively, published by the Bhargava School Book Dépôt, Lucknow. (6 pies each.)
2. Swadesh Gan, Parts I and II (on white printing) for Classes I, and II and III and IV of Vernacular Schools, respectively, published by the Bhargava School Book Dépôt, Lucknow. (5 pies each.)
3. Bharat Gan, Parts I and II (coloured cover without illustrations) for Classes I and II and III and IV of Vernacular Schools, respectively, published by the Standard Press, Allahabad. (9 pies each.)
4. Swadesh Sangit, Parts I and II (with cover on art paper with notes and illustrations) for Classes I and II and III and IV of Vernacular Schools, respectively, published by the Indian Press, Allahabad. (Part I, 1 anna 3 pies; Part II, 1 anna 6 pies.)
5. Swadesh Sangit, Parts I and II (with 60 lb. cover and without illustration and notes) for Classes I and II and III and IV of Vernacular Schools respectively, published by the Indian Press, Allahabad. (9 pies each.)
6. Swadesh Prem, Parts I and II (illustrated) for Classes I and II, and III and IV of Vernacular Schools, respectively, published by Rai Sahib Lala Ram Dayal Agarwala, Allahabad. (9 pies each.)
7. Swadesh Prem, Parts I and II (unillustrated) for Classes I, II, and III and IV of Vernacular Schools, respectively, published by Rai Sahib Lala Ram Dayal Agarwala, Allahabad. (6 pies each.)
8. Hindustani Bachchon ke Gane, Parts I and II (with illustrations on ivory finish paper and cover in one colour) for Classes I and II and III and IV of Vernacular Schools, respectively, published by the Hindustani Book Dépôt, Lucknow. (Part I, 9 pies; Part II, 1 anna.)

9. Hindustani Bachchon ke Gane, Parts I and II (with illustrations on art paper and coloured border on each page and two-coloured title) for Classes I and II and III and IV of Vernacular Schools, respectively, published by the Hindustani Book Dépôt, Lucknow. (Part I, 1 anna; Part II, 1 anna 3 pies.)

10. Desh ke Git, Parts I and II for Classes I and II and III and IV of Vernacular Schools, respectively, published by the Shishu Press, Allahabad. (Parts I and II, 6 pies each.)

11. Swadeshi Gan, Parts I and II for Classes I and II and III and IV of Vernacular Schools, respectively, published by the Saraswati Publishing House, Agra. (Part I, 9 pies; Part II, 1 anna.)

12. Swadesh Gitawali, Parts I and II for Classes I and II and III and IV of Vernacular Schools, published by the Newal Kishore Press, Lucknow. (Part I, 9 pies; Part II, 1 anna.)

13. Hindustani Git, Parts I and II for Classes I and II and III and IV of Vernacular Schools, respectively, published by the School Book and Apparatus Dépôt, Lucknow. (Part I, 6 pies; Part II, 9 pies.)

14. Patriotic Poems in Hindi, Parts I and II for Classes I and II and III and IV of Vernacular Schools, respectively, published by P. C. Dwadesh Shreni and Co., Aligarh. (Part I, 3 pies; Part II, 4 pies.)

15. Desh Bandana, Parts I and II for Classes I and II and III and IV of Vernacular Schools, respectively, published by Agarwal Brothers and Co., Allahabad. (Parts I and II, 4½ pies each.)

16. Rashtri Gan, Parts I and II (cheap edition) for Classes I and II and III and IV of Vernacular Schools, respectively, published by the Gautam Brothers and Co., Cawnpore. (Part I, 6 pies; Part II, 9 pies.)

17. Rashtri Gan, Parts I and II (picture edition) for Classes I and II and III and IV of Vernacular Schools, respectively, published by the Gautama Brothers and Co., Cawnpore. (Part I, 9 pies; Part II, 1 anna.)

#### URDU.

1. Watan ki Yad, Parts I and II for Classes I and II and III and IV of Vernacular Schools, respectively, published by the Newal Kishore Press, Lucknow. (Part I, 9 pies; Part II, 1 anna.)

2. Patriotic Poems, Parts I and II for Classes I and II and III and IV of Vernacular Schools respectively, published by Lala Ram Narain Lal, Allahabad. (Part I, 6 pies; Part II, 9 pies.)

3. Watan ke Rag, Parts I and II (illustrated) for Classes I and II and III and IV of Vernacular Schools, respectively, published by the Indian Press, Allahabad. (Part I, 1 anna 3 pies; Part II, 1 anna 6 pies.)

4. Watan ke Rag, Parts I and II (unillustrated) for Classes I and II and III and IV of Vernacular Schools, respectively, published by the Indian Press, Allahabad. (Parts I and II, 9 pies each.)

5. Watan ke Git, Parts I and II for Classes I and II and III and IV of Vernacular Schools, respectively, published by the Saraswati Publishing House Agra. (Parts I and II, 9 pies each.)

6. Tarana-i-Watan, Parts I and II (coloured cover without illustrations) for Classes I and II and III and IV of Vernacular Schools, respectively published by the Standard Press, Allahabad. (Part I, 6 pies; Part II, 9 pies.)

7. Patriotic Poems in Urdu, Parts I and II for Classes I and II and III and IV of Vernacular Schools, respectively, published by P. C. Dwadesh Shreni and Co., Aligarh. (Part I, 4 pies; Part II, 5 pies.)

8. Hubb-i-Watan in Urdu, Parts I and II (illustrated) for Classes I and II and III and IV of Vernacular Schools, respectively, published by Rai Sahib Lala Ram Dayal Agarwala, Allahabad. (9 pies each.)

9. Hubb-i-Watan in Urdu, Parts I and II (unillustrated) for Classes I and II and III and IV of Vernacular Schools, respectively, published by Rai Sahib Lala Ram Dayal Agarwala, Allahabad. (6 pies each.)

10. Watan ke Git, Parts I and II for Classes I and II and III and IV of Vernacular Schools, respectively, published by the Shishu Press, Allahabad. (Parts I and II, 6 pies each.)

11. Sarod-i-Watan, Parts I and II (cheap edition) for Classes I and II and III and IV of Vernacular Schools, respectively, published by Gautama Brothers and Co., Cawnpore. (Part I, 6 pies; Part II, 9 pies.)

12. Sarod-i-Watan, Parts I and II (picture edition) for Classes I and II and III and IV of Vernacular School, respectively, published by Gautam Brothers and Co., Cawnpore. (Part I, 9 pies; Part II, 1 annas.)

13. Watan ka Tarana, Parts I and II for Classes I and II and III and IV of Vernacular Schools, respectively, published by Bhargava Book Agency, Allahabad. (Parts I and II, 6 pies each.)

### Copy Slips.

#### CLASS I.

*Urdu.*—Urdu Model Copy-slip no. I, published by the School Book and Apparatus Dépôt, 406, Fatehganj, Lucknow, 2nd edition. (1 anna.)

or

Urdu Copy-slip, Part I, by Ram Narain Lal, Katra, Allahabad. (1 anna.)

or

Muallim Khus Navisi, Slip no. 3, by Sita Ram and Abul Hasan Haidri, published by Bhargava Book Agency, Johnstonganj, Allahabad. (1 anna.)

*Hindi*.—Hindi Copy-slip no. I, by Kamta Prasad, for Vernacular Schools, published by Raghunath Prasad & Sons, Booksellers, Chauk, Cawnpore. (1 anna 3 pies.)

or

Hindi Model Copy-slip no. I, published by the School Book and Apparatus Dépôt, 406, Fatehganj, Lucknow, 1925 edition. (1 anna.)

or

Model Copy-slip no. I(A), in Hindi, published by the School Book and Apparatus Dépôt, 406, Fatehganj, Lucknow, 1925 edition. (1 anna.)

or

Hindi ki Pahli Copy-slip, by Pandit Madan Mohan, published by Hindustani Book Dépôt, Lucknow. (1 anna.)

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CLASS II.

*Urdu*.—Urdu Model Copy-slip no. II, published by the School Book and Apparatus Dépôt, 406, Fatehganj, Lucknow, 1925 edition. (1 anna.)

or

Urdu Copy-slip, Part II, by Ram Narain Lal, Katra, Allahabad. (1 anna.)

or

Muallim Khus Navisi, ships nos. 4 and 4A, by Sita Ram and Abul Hasan Haidri, published by Bhargava Book Agency, Johnstonganj, Allahabad. (9 pies each.)

*Hindi*.—Hindi Copy-slip no. II, by Kamta Prasad, for Vernacular Schools, published by Raghunath Prasad & Sons, Booksellers, Chauk, Cawnpore. (1 anna 3 pies.)

or

Hindi Model Copy-slip no. II, published by the School Book and Apparatus Dépôt, 406, Fatehganj, Lucknow, 1925 edition. (1 anna.)

or

Hindi ki Dusri Copy-slip, by Pandit Madan Mohan, published by Hindustani Book Dépôt, Lucknow. (1 anna.)

CLASS III.

*Urdu*.—Urdu Model Copy-slip no. III, published by the School Book and Apparatus Dépôt, 406 Fatehganj, Lucknow, 2nd edition. (1 anna 3 pies.)

or

Urdu Copy-slip, Part III, by Ram Narain Lal, Katra, Allahabad.

or

Muallim Khus Navisi, slips nos. 5 and 5A, by Sita Ram and Abul Hasan Haidri, published by Bhargava Book Agency, Johnstonganj, Allahabad. (9 pies each.)

*Hindi*.—Hindi Copy-slip no. II, by Kamta Prasad, for Vernacular Schools, published by Raghunath Prasad & Sons, Booksellers, Chauk, Cawnpore. (1 anna 3 pies.)

or

Hindi Model Copy-slip no. III, published by the School Book and Apparatus Dépôt, 406, Fatehganj, Lucknow. (1 anna 3 pies.)

or

Hindi ki Tisri Copy-slip, by Pandit Madan Mohan, published by Hindustani Book Dépôt, Lucknow. (1 anna 3 pies.)

or

Sulekh Shikshak, Part 5A (Copy-slip), by Sita Ram and Ram Sundar Tripathi, published by Bhargava Book Agency, Allahabad. (9 pies.)

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CLASS IV.

*Urdu*.—Urdu Model Copy-slip no. III, published by the School Book and Apparatus Dépôt, 406, Fatehganj, Lucknow, 2nd edition. (1 anna 3 pies.)

or

Muallim Khus Navisi, slips nos. 5 and 5A, by Sita Ram and Abul Hasan Haidri, published by Bhargava Book Agency, Johnstonganj, Allahabad. (9 pies each.)

*Hindi*.—Hindi Copy-slip no. III, by Kamta Prasad, for Vernacular Schools, published by Raghunath Prasad & Sons, Bookseller, Chauk, Cawnpore. (1 anna 3 pies.)

or

Hindi Model Copy-slip no. III, published by the School Book and Apparatus Dépôt, 406, Fatehganj, Lucknow, 1925 edition. (1 anna and 3 pies.)

or

Sulekh Shikshak, Part 5A (Copy-slip), by Sita Ram and Ram Sundar Tripathi, published by Bhargava Book Agency, Allahabad. (9 pies.)

or

Hindi ki Tisri, Copy-slip, by Pandit Madan Mohan, published by Hindustani Book Dépôt, Lucknow. (1 anna 3 pies.)

**Recommended for teachers' use:—**

Lipi Samiksha, by Gauri Shankar Bhatia, published by Akcchhar Vigyan Karyalaya, Maswanpur, Cawnpore. (2 annas.)

**Books on language, composition, literature, etc., recommended for teachers' use:—**

Bal Bodh Vyakaran, by Bamdeo Sharma, published by Ram Narain Lal, Katra, Allahabad. (3 annas.)

Prabandha aur Patra, Part I, by Anandi Prasad Srivastava, published by Bhargava Book Agency, Allahabad. (4 annas.)

Hindi Rachna ki Kunji, by Vishnu Datta Bajpai, published by Vishnu Datta Bajpai, Assistant Teacher, D. A.V. High School, Allahabad. (4 annas.)

Anokhi Dunia, Part II, by Munshi Lal Agarwala, published by Macmillan & Co., Calcutta. (10 annas.)

Bachchon ki Khat-o-Kitabat, by Shakir Ali, Allahabad, published by Bhargava Book Agency, 65, Johnstonganj, Allahabad. (1 anna 6 pies.)

Kashi Hindi Kosh, by Kashi Bishambhar Agarwala, published by Rai Sahib Ram Dayal Agarwala, Katra, Allahabad. (1 rupee 8 annas.)

Sridhar Bhasha Kosh, by Sridhar Tripathi, published by Newal Kishore Press, Lucknow. (3 rupees.)

APPENDIX I(b).

*Arithmetic.*

*Classes I and II.*—Girls' Lower Primary Arithmetic (Urdu or Hindi) Macmillan and Company. (Urdu—11 annas; Hindi—10 annas.)

or

Girls' Primary Arithmetic, book I (Urdu or Hindi), by K. C. Bhattacharya, Indian Press, Allahabad. (12 annas each.)

or

Onkar Ilmulhisab, Part I, or Onkar Ankaganit, Part I, 1930 edition by Chaitanya Das and Shyam Sundar Lal Shukla, published by Onkar Press, Allahabad. (Urdu—8 annas; Hindi—6 annas.)

*Classes III and IV.*—Girls' Upper Primary Arithmetic (Urdu or Hindi), Macmillan and Company. (Urdu—8 annas; Hindi—6 annas.)

or

Girls' Primary Arithmetic, book II (Urdu or Hindi), by K. C. Bhattacharya, Indian Press, Allahabad. (10 annas each.)

or

Onkar Ilmulhisab, Part II, or Onkar Ankaganit, Part II, 1930 edition, by Chaitanya Das and Shyam Sundar Lal Shukla, published by the Onkar Press, Allahabad. (Urdu—9 annas; Hindi—8 annas.)

*Books recommended for teachers' use.—*

*Arithmetic.*—Shiksha Pranali in Hindi, by K. C. Bhattacharya and Chandra Mauli Shukul, Indian Press, Allahabad. (12 annas.)

Modern Vernacular Arithmetic in Hindi and Urdu (through Pictures and Diagrams), for Preparatory Sections A and B, published by the School Book and Apparatus Dépôt, Lucknow.

Hisab Bal Batika, Part I, in Hindi for Classes I and II by Prahlad Dat Pande, Pundi Moripara, Sharafa School, Meerut city, c/o Dr. Bansidhar Sharma, tahsil Meerut city. (2 annas 6 pies.)

Vaniya Vikash, by Manna Lal Awasthi, Manager and Headmaster, Ganga Din Gauri Shankar Vaishya Pathshala, Khapra Mohal, Cawnpore (8 annas.)

New Infant Arithmetic (Urdu) by Nathimal Sharma, published by Gaya Prasad & Sons, Agra. (3 annas.)

New Infant Arithmetic (Hindi) by Nathimal Sharma, published by Gaya Prasad & Sons, Agra. (3 annas.)

Onkar Ganit Praveshika, published by Onkar Press, Allahabad. (3 annas.)

APPENDIX I(c).

Outline Syllabus for lessons on Hygiene in Classes III and IV.

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Class III.

Lesson 1.

*Cleanliness of the body.*—Necessity of cleanliness for our own sake and for others; danger of uncleanness to cuts and sores, objectionable smell from dirty children; dangers of handling food with dirty hands.

Lesson 2.

Care and appearance of the hair, need for frequent washing—the danger of nits. Care of nails—to be kept short and clean; not to be bitten.

Lesson 3.

Washing and how to wash properly; use of soap; warm water best for cleansing purposes; cold for tonic; face, neck and hands need most washing; whole body should be washed once daily.

Lesson 4.

Need for cleanliness of body inside as well out; bowels should be moved at least once a day at a regular time, preferably in the morning. Lack of regularity an important reason for constipation; drink a glass of water before retiring for the night.

Lesson 5.

*Clothing.*—Need for frequent change of clothing; no clothing worn during the day should be worn also at night. Importance of tidiness.

Lesson 6.

*Fresh air and sunlight.*—The value of fresh air and sunlight; necessity of fresh air for lungs. Best air is out of doors.

Lesson 7.

*Breathing.*—Children should be taught how to breathe properly. Deep breathing is best and comes naturally when children run about; breathe through the nose. Nose to be kept clean. How to clean nose? Danger of mouth breathing; function of nose to warm and filter air.

*Exercise and correct posture.*

Lesson 8.

*Sleep.* Importance of rest.—Importance of rest and sleep. Early to bed; how many hours' sleep are the children getting? Should have about 12.

Advantages of well-aired room, open window; important to have through current of air.

*Lesson 9*

Do children sleep with open windows in winter? Do they have a fire or lamp in the room? Do they cover up their face and head? Say how ventilation should be secured in winter.

*Lesson 10.*

*Care of the teeth.*—The importance of teeth, the more they are used the better for them. How to keep teeth in good condition? A lesson in cleaning the teeth showing how to use the *datoon*.

*Lesson 11.*

Articles useful for cleaning teeth. What do children generally use at home for cleaning their teeth? When to clean teeth (best before going to bed and in the morning). Injurious effects of *pan* on teeth. Harmful effects of picking teeth with pins, sticks.

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**Class IV.**

*Lesson 1.*

*Wholesome food and eating habits.*—Adequate nutrition is the best protection against illness and ensures a better and quicker recovery from fatigue. Children should be taught the values of food such as milk, fresh fruits, green vegetables and the bad effects of spices and too many sweets.

*Lesson 2.*

*Evils of intoxicants and drugs.*—What are the chief intoxicants and drugs people use?—(wine, opium and its various derivatives, hemp, *tari*, *charas*). Typical appearances of people who are addicted to various forms of intoxicants and drugs. Evil effects of each class of intoxicants and mental, physical and moral deterioration that ensues. Use of intoxicants ruinous to the peace and happiness of the family.

*Lesson 3.*

Meals should be regular in period of time; no food between regular meals, advantageous to drink water when thirsty and between meals but not much water *during* meals. Never drink with food in mouth; eat slowly, chew food well. Hands and face should be washed before meals.

*Lesson 4.*

Children should not eat dirty food, the remainder of what some one else has partly eaten or share glass or cup with other children; point out the danger of transmission of disease by this. Name diseases that may be transmitted.

*Lesson 5.*

*Care of the eyes and ears.*—Children should at once tell their teacher if they are unable properly to see words in books or on the black-board. Need for good light on all work; not to bend over work or read or sew in bad light.

Cleaning of the eyes. Use of boric acid.

*Lesson 6.*

Danger of putting any hard substance into ear; how to clean ear of accumulated wax?

*Common infectious diseases.*—Cause, manner of spread and protection against:—

*Lesson 7.*

(i) Cholera.

*Lesson 8.*

(ii) Plague.

*Lesson 9.*

(iii) Small-pox.

*Lesson 10.*

(iv) Malaria.

*Lesson 11.*

(v) Hook-worm.

*Lesson 12.*

*Domestic Hygiene.*—Proper storage of food and water in the house—manner of contamination of food and pollution of water.

*Lesson 13.*

Cleanliness of rooms, furniture, bedding, cooking utensils, surroundings of the house, directions for sweeping and dusting a room, how to dispose of refuse and dirty water. Care of shoes and clothes in the different seasons.

*Lesson 14.*

Treatment of cuts, burns, scalds, sore eyes.

NOTE.—The teaching throughout should be as practical as possible.

**Books for teachers' reference on Physiology and Hygiene.**

Shahrah-i-Tandurusti (Urdu or Hindi), Gulab Singh and Sons, Lahore. (Urdu—4 annas 1 pie, Hindi—4 annas 2 pies.)

Hindustani Gharon men Timardari in Urdu (Indian Home Nursing), by Dr. Major Muhammad Abdul Hakim, State Surgeon, Rampur. (Rs. 3.)

Tandurusti ki Pahli Kitab, by Col. J. W. D. Megaw, Indian Red Cross Society, Viceregal Lodge, Delhi. (12 annas.)

Swastha Raksha ke Prathmic Niyama (the Hindi version of Col. J. W. D. Megaw's First Laws of Health), Indian Red Cross Society, Viceregal Lodge, Delhi. (12 annas.)

Sehat ki Kahani, by E. Marsden, B.A., translated into Urdu by Munshi Abid Hasan Faridi, published by Macmillan & Co. (Re. 1.)

Hindi translation of the Land of Health and the Land of Wealth, by Pandit Ram Narain Misra, published by Macmillan & Co. (Re. 1.)

Arogya Dig Darshan, by Mahatma Mohan Das Karam Chand Gandhi, published by Narayan Dat Sahgul & Sons, Booksellers, Lahore. (Urdu), 1st edition. (12 annas.)

Lower Swasth, by Sriyut Bimal, Narvadeshwar Pustakalaya, Babura, Shahabad, 1925 edition. (2 annas.)

Jeonar, by Shrimati Satyawati Dwivedi Gajpuri, Hindi Pustak Agency, 126, Harrison Road, Calcutta. (5 annas.)

Bachcha (The Child). A Book of Domestic Science in Hindi, by Captain M. A. Quraishi, I.M.S., translated into Hindi by Karam Narayan Bahl, Professor, Muir Central College, Allahabad. (Re. 1.)

Risala-i-Parhezgari (Manual of Temperance), revised edition, by Munshi Mewa Ram, B.A., late Inspector of Schools, Jhansi division. (4 annas.)

Sanyam Shiksha (Manual of Temperance), revised edition, by Munshi Mewa Ram, B.A., late Inspector of Schools, Jhansi division. (4 annas.)

Nari Ratna in Hindi, by the wife of the late Pandit Chandra Bhal Bajpai, Taluqdar, Kardaha Estates, district Unao.

Arogya Dig Darshan, by Mahatma Mohan Das Karam Chand Gandhi, translated by Bishambhar Sahai Premi, Meerut. (Hindi.) (6 annas.)

## APPENDIX II.

## Scheme of Object Lessons.

*Instructions to Teachers.*

## OBJECT LESSONS.

*Aims.*—The chief aims of these lessons are to guide the children in the use of their senses, seeing, hearing, feeling, smelling and tasting. In the higher classes the lessons will further be used to train children to reflect on the result of their observations and to reason about things; they will compare and contrast things. The lessons may add to the children's intelligent knowledge of common things, and be made the basis of instruction in language and drawing. But no endeavour should be made to impart to children information, however, useful it may be, without making them handle and examine things for themselves.

*Choice of objects.*—Familiar objects, chosen for the locality in which the school lies, are recommended. These are better than unfamiliar objects as means of guiding children in the use of their senses; we shall make them observant of differences if we get them to see what they have previously failed to notice. Further, objects which can be so easily procured that all children may bring a specimen to the class and examine it will give more interest to the lessons than objects which can only be shown from the teacher's desk or by picture.

The objects should be chosen with reference to the season of the year and to the age of the pupils. Thus, lessons in which flowers are being examined should be taken in the months of March and April, when the children will have opportunities of examining many varieties; and, while a lesson on germination would be suitable for class IV, it would be too difficult for class II.

In order to give opportunities for comparison the objects chosen should have some connexion with others. In the lowest classes they will be linked together by dealing with similar groups of objects (e.g., common crops) between which the pupils may note comparison and contrast. In the higher classes there should be more continuity of subjects; the series of lessons should give the children opportunities to make deductions and should lead them to the statement of simple general truths such as "animal life is dependent on plant life." By association in this way the lessons will gain greatly in interest and will admit of gradual progress in difficulty along particular lines.

The actual objects should, wherever possible, be obtained. Nearly all the lessons in the following lists can be illustrated by objects which the children can bring to school. If the teacher encourages his pupils to exert themselves in this way, he will help greatly to make his lessons a success. Pictures are a poor substitute for the real object and should be used in the place of objects only when lessons are given

on certain animals which cannot be shown in the school, e.g., camel, elephant, but which may form the subject of a lesson if children are familiar with them.

It is not necessary to have many objects in a course. The teachers should not attempt to give lessons in all the objects mentioned in the following list; *he should make a selection*. Habits of detailed observation are better cultivated by examining a few objects thoroughly than by cursorily looking at many.

*Method of teaching.*—The first necessity in an object lesson is an object to observe. It would not be necessary to say this were it not a fact that many teachers are content with a picture, a model, or even a description from a book. A picture or model will help to make a description more vivid, but cannot take the place of the object itself.

The teacher should first find out from the class all they knew about the object. He should then lead them to examine it more closely and notice things which formerly they had failed to observe. Finally, he should lead them to see how the object is adapted by its structure to its uses, ways of living, or mode of growth.

The most common fault of these lessons is that the children do nothing but listen. The teacher should guard against the temptation of imparting *much information* in one lesson, for children become tired and bewildered by many facts and descriptions. The information should only be such as the object itself gives, any further information may, if necessary, be given in other lessons. Thus a lesson on stamps may be an object lesson, but an account of the way in which letters are conveyed from one place to another should be left to the reading or composition lesson; while the growth of particular plants may be studied in the observation lesson; the distribution of crops in a particular part of the country should be taught in the geography lesson.

"One thing at a time" is a good rule. But while it is not desirable in one lesson to deal with several kinds of objects, there should always be several specimens of an object in the class, and, if possible, each pupil should have a specimen before him.

Questions should be put at the beginning of a lesson to find out what the children already know about the object. In the course of the lesson questions should be put in order to stimulate the children to think and to look at things for themselves. At suitable stages or at the end of the lesson the teacher should question the class to find out what they have grasped. He should also, at the end of suitable stages, encourage the class to ask him questions.

The teacher's language should be simple and his own (i.e., not quoted from a text-book), and if he uses technical terms these should only be such as the boys are likely to use subsequently. The value of the lessons as a means of training pupils in the correct use of language in speaking and writing should not be overlooked. The pupils

should therefore be encouraged to express the results of their observation by accurate descriptions in speaking or writing, and while the teacher should not make his lesson one on grammar or composition, he should not allow careless expressions to pass uncorrected. In the preparatory classes the lessons should take the form of conversations between teacher and pupils. In Classes I and II the children should be asked to write the name of the object and, where possible, to make drawing. In Classes III and IV simple records should be made and children should invariably be asked to make simple drawings. The records may at first be copies of the teacher's summaries on the blackboard, but these should be replaced as soon as possible by simple descriptions written by the pupils in their own words.

More and more will be expected of pupils as they grow older. In the infant class the lessons must be short and bright, and questions will be put to make children examine things. In Classes I and II the objects chosen will be more difficult of analysis and will require more careful examination than those of the infant class; pupils will be led to compare and contrast things, and will be questioned to make them think why the properties and structure of the objects are specially adapted to its uses, ways of living, or mode of growth. In Classes III and IV there will be greater demand than in previous classes on the reasoning powers; things will be classified, deductions will be made, general truths will be arrived at, and a training will be given in exact measurement.

Diagrams and drawings by the teacher on the blackboard are valuable as a means of giving interest to a lesson; but these should follow, not precede, the children's observation; the blackboard sketches should not be elaborate drawings. The fewer lines in them the better; each drawing should bring out only one or two points, for any elaboration will only distract the class.

When experiments are performed, information should not be given as to what may be expected to happen; when the experiment has been carried out, the children should be questioned and led to reason out for themselves what it teaches.

For successful teaching the *teacher's interest* is the first essential. Instead of depending on books, he should work at the objects himself and guide the children along the lines of his own observation and reasoning.

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#### Scheme of Object Lessons.

Teachers should *select* their lessons from the following lists. They should choose from lists objects which are found in the district in which the school is situated, and are best suited to the ages of the children.

**Infant Class.**

*Common things.*—Simple forms: sphere, cube, cylinder—illustrated by balls, pieces of sugarcane, pencils, *pichkari* (syringe), *bansri* (flute), bricks. Colour; the children should be led to distinguish the colours white, black, red, green, yellow and blue. The following should be used as illustrations. Flowery, coloured paper, cloth, wood, beads, *churis* (bangles).

*Common animals and birds.*—Cow, goat, sheep, cat, dog, parrot, pigeon, *titar*.

*Common fruits.*—Guava, mango, orange, tamarind, *ber*.

*Common articles of food.*—Milk, water, bread, *dal* (lentil), *ghee* (clarified butter), *dahi* (curd).

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**Class I.**

*Common things.*—*Takhti*, slate, knife, *khurpa* (hoe), *pharua* (spade), *khapra* (tile), *ghara* (pitcher).

*Common animals and birds.*—Buffalo, horse, ass, camel, sparrow, *maina*.

*Common crops.*—Wheat, barley, gram, maize, rice, *bajra*, peas.

*Common vegetables.*—*Sag* (spinach), *bhindi* (lady's finger), *gajar* (carrot), *mul* (radish), potato, *kohra* (pumpkin).

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**Class II.**

*Common things.*—Stamps, metals (iron, brass, copper), coins, clay, sand, sulphur, saw, *chheni* (chisel), *barni* (borer), *hal* (plough), harrow, *kolhu* (sugar mill).

*Common animals.*—Elephant, monkey, fish, snake, squirrel, rabbit, frog (to be selected only if they are frequently seen in the locality and if suitable pictures are available), peacock, crow, blue-jay.

*Common trees and plants.*—Mango, *pipal*, *nim*, tamarind, bamboo, cotton, castor plant.

Serial number.	Subject.	Detailed syllabus.	Month of the year in which the subject is to be taught.
		<b>Class III.</b>	
1	Classification of objects.	Living and non-living objects. Natural and artificial objects.	July.
2	Plants and their parts.	<p>Examination of the number of the common flowering plants of the neighbourhood with reference to their flowers, leaves, stems, roots, fruits, and seeds, and also to the following :—</p> <p>(a) Flowers yield seeds and fade away.</p> <p>(b) The stem holds the leaves up to the sunlight and supports the flowers.</p> <p>(c) The root fixes the plant in the soil.</p>	July and August.
3	Flowers	<p>Examination of some of the common flowers of the season with reference to the following parts :—</p> <p>Petals, sepals, and stamens. The following are examples which may be studied :—</p> <p><i>Khira</i> (cucumber), <i>bhindi</i> (lady's finger), <i>lauki</i> (gourd), jasmine, rose, <i>dhatura</i>, <i>gul hazara</i>.</p>	August and September.

Serial number.	Subject.	Detailed syllabus.	Month of the year in which the subject is to be taught.
4	Fruits ..	<p>Examination of some of the common fruits of the season with reference to differences in colour, smell, taste, shape, and size, and also to the fact that fruits contain seeds. The following fruits may be examined :—</p> <p>Custard-apple (<i>sharifa</i>), lemon, orange, cucumber.</p>	September and October.
5	Leaves and their classification.	<p>Classification of leaves of different plants; leaves to be brought by pupils :—</p> <p>(a) By shape—</p> <p>(i) Long and narrow, e.g., grasses, especially the following :—</p> <p><i>Kans, makka, sarkanda, wheat, rice, barley.</i></p> <p>(ii) Needle-shaped, e.g., <i>chir</i>.</p> <p>(iii) Oval-shaped, e.g., <i>tidhara, bargad</i>.</p> <p>(b) By structure—</p> <p>(i) Simple (one-blade, e.g., mango, <i>pipal, bargad, mulberry, kela</i>).</p>	November and December.

Serial number.	Subject.	Detailed syllabus.	Month of the year in which the subject is to be taught.
		<p>(ii) Compound (blades, divided into separate leaflets), e.g., <i>arhar</i>, <i>gram</i>, <i>nim</i>, <i>shishim</i>.</p> <p>(c) By margin—</p> <p>(i) Leaves with entire margins, e.g., <i>mango</i>, <i>bar-gad</i>, <i>mahua</i>, <i>gular</i>, <i>bamboo</i>, <i>jack-fruit</i>.</p> <p>(ii) Leaves with toothed margins, e.g., <i>mulberry</i>, <i>castor</i>, <i>rose</i>.</p> <p>(d) By veining—</p> <p>(i) Net-veined leaves, e.g., <i>pipal</i>, <i>bar-gad</i>, <i>gourd</i>, <i>melon</i>.</p> <p>(ii) Parallel-veined leaves, e.g., <i>sugar-cane</i>, <i>bamboo</i>, <i>haldi</i>.</p>	
6	Flowers ...	<p>Examination (resumed) of some of the common flowers of the winter season with reference to their petals, sepals, and stamens. The following may be studied:—  <i>Cotton</i>, <i>poppy</i>, <i>bhanta</i>, <i>mustard</i>, <i>dhaniya</i>, <i>peas</i>.</p>	January.

Serial number.	Subject.	Detailed syllabus.	Month of the year in which the subject is to be taught.
7	Trees ...	<p>Identification of some of the common trees of the neighbourhood by their leaves, of which drawings should be made by the pupils.</p> <p>The following are examples which may be studied:—  <i>Shisham, nim, mahua, sal, mango, pipul, bargad, kathal, mulberry, bamboo, toddy-palm, date-palm.</i></p>	January and February.
8	Fruits ...	<p>Examination of some of the common fruits of the winter season, as in September and October.</p> <p>The following are examples which may be examined:—  <i>Guava, plum, kamrakh, anar, anjir.</i></p>	February.
9	Observation lessons.	<p>Observation lessons on the following:—  Cotton, jute, tobacco, wool, paper and pencil.</p> <p style="text-align: center;">Class IV.</p>	March and April.
1	Needs of a plant	<p>Plants require: (1) sunlight, (2) air, (3) water.  Plants are living things.</p>	July.

Serial number.	Subject	Detailed syllabus.	Month of the year in which the subject is to be taught.
2	Flowers	<p>Examination of some of the common flowers of the season with reference to their carpels, sepals, petals and stamens. The following are examples which may be examined :—</p> <p>Rose and jasmine—to show petals.</p> <p>Rose and <i>dhatura</i>—to show sepals.</p> <p><i>Dhatura</i> and <i>bhindi</i>—to show carpels.</p>	August.
3	Examination and classification of plants used for food.	<p>A simple classification of plants used as food by men or animals and an examination and comparison of these. The following are examples :—</p> <p>(a) Seeds used as food —<i>arhar</i>, <i>urd</i>, peas, gram, <i>mung</i>, bean.</p> <p>(b) Fruits used as food — orange, lemon, peas, guava, mango, banana</p> <p>(c) Roots used as food —turnip, carrot, radish, sweet potato.</p> <p>(d) Stems used as food —sugarcane, <i>ganthgobh</i>.</p> <p>(e) Leaves used as food —cabbage, <i>chana</i>, <i>sagmethi</i>, <i>sarson</i>, <i>marsa</i>, <i>palak</i>.</p>	September and October.

Serial number.	Subject.	Detailed syllabus.	Month of the year in which the subject is to be taught.
4	Mensuration	<p>Yard measure ..</p> <p>Examination of a yard measure and its divisions. How to measure to the nearest inch.</p> <p>Class to guess length to nearest yard, e.g., lengths of class-room, height of door, etc. These to be verified by measurements made by the class. Class also to guess lengths to the nearest foot of smaller objects, e.g., width of table, etc., and the measurements to be verified by experiments.</p>	November.
		<p>Foot rule.</p> <p>Examination of a foot rule (divided into eighths and tenths of an inch). To copy part of the rule and its divisions. How to measure to the nearest eighth or tenth of an inch.</p>	December.
		<p>Measurement of straight lines.</p> <p>Blocks of wood of rectangular shape, rectangular pieces of cardboard, tin, etc., for measurement. Measure lengths of sides in inches and eighths of an inch and also in tenths of an inch, expressing the latter in the decimal notation.</p>	January.

Serial number.	Subject.	Detailed syllabus.	Month of the year in which the subject is to be taught.
5	Flowers	<p>Examination (resumed) of some of the common flowers of the winter season, with reference to their nectaries as well as petals, sepals, stamens, and carpels (previously done).</p> <p>The following are examples which may be studied :—</p> <p>Mango, mustard and <i>dhaniya</i>—to show nectaries.</p> <p>Mustard and cotton—to show carpels.</p> <p>Mustard, peas, beans and cotton—to show stamens.</p> <p>Poppy and rose—to show sepals.</p> <p>Cotton and gourd—to show petals.</p>	February.
6	Observation lessons.	<p>Observation lessons on the following :—</p> <p>Wood, tobacco and the common vegetable oils, e.g., mustard, linseed, cocoanut and <i>sesamum</i>.</p>	March and April

Book recommended for teachers :—

Zamindar our uske Dushman kire Part I, published by Messrs. Uttar Chand Kapur and Sons, Booksellers and publishers, Anarkali, Lahore.

APPENDIX III.  
COURSE IN MUSIC.

DIRECTIONS TO TEACHERS.

The teacher should gradually train the pupils to understand Tali, Barjswar, Aroh, Awaroh, and by the time they have finished the Upper Primary course they should have a good knowledge of these.

He should also give them practice in Tal, Matra, Bibhag, and at end of the Upper Primary they should have gained a fair degree of proficiency in these.

Books recommended are the following :—

- (1) Balodaya Sangit, Parts 1 and 2.
- (2) Sangit Bal Prakash, Parts 1, 2 and 3.
- (3) Sangit Bal Bodh, Parts 1, 2, 3 and 4.
- (4) Sangit Tatva Darshak.
- (5) Ankit Alankar.
- (6) Mahila Sangit, Parts 1 and 2.

## Course for Classes I to IV.

## CLASS I.

1. To give the students a training in the notes of music the following four Alankar should be taught:—

- (1) Saregamapadhanisa.
- (2) Sareg, Regam Gamap\_\_\_\_\_
- (3) Saregagag, Regamamam\_\_\_\_\_
- (4) Saregres, Saregmagres, Saregmapamagres\_\_\_\_\_

2. The following four songs of the following four Rag should be taught:—

<i>Rag.</i>	<i>Song.</i>
(1) Rag Bhupali ...	Gaiye Ganpati.
(2) Rag Khamach ...	HaH Bhaktan ke.
(3) Rag Kaffi ...	Bar Bar.
(4) Rag Jhinjhoti ...	Prabhu more awgun.

## CLASS II.

1. The students should be made to learn the following Alankar by heart:—

- (1) Saregam, Regamap \_\_\_\_\_
- (2) Sagres, Remagare \_\_\_\_\_
- (3) The first four Alankar learnt should be taught in Alap.

2. Students should be taught the following songs of the Rag given below:—

<i>Rag.</i>	<i>Song.</i>
(1) Rag Kalyan ...	Bando sri hari.
(2) Rag Bhairvi ...	Jo hari son.
(3) Rag Asa ...	Udho so murat.
(4) Rag Sarang ...	Darsan dena.
(5) Rag Des ...	Tu dayal.

3. A knowledge of Tal with Matra of all the songs learnt should be imparted and practice of counting Tal with the hand should be encouraged.

## CLASS III.

1. The six Alankar of the I and II classes should be taught tuned in Rag Kalyan, Rag Bhairvi and Rag Bhairav.

2. The following songs of the undermentioned Rag should be taught with Tal :—

<i>Rag.</i>		<i>Song.</i>
(1) Gaurh malar	... ..	Aie badariya.
(2) Pilu	... ..	Raghubir tumko.
(3) Khamach	... ..	Kyon man jiwan.
(4) Asawari	... ..	Kaun yatan.
(5) Bhairav	... ..	Jago Mohan pyare.

3. The names of the Rag of all songs learnt and their time of singing should be taught.

#### CLASS IV.

1. Students should be given a preliminary idea about Swar lipi (notation), the octaves of music and the three kinds of Swar (Shudha, Komal and Tibra). They should also be taught from an idea of Laya-kari, i.e., a knowledge of 1,  $\frac{1}{2}$  and  $\frac{1}{4}$  Matra, and also their symbols in writing.

2. They should know the names of Swar (Sharz, Madhya and Tar), Saptak and Layakari.

3. Students should be given practice of reading Alankar written on blackboard, with proper tune and timing.

4. The following songs of the Rag given below should be taught :—

<i>Rag.</i>		<i>Song.</i>
(1) Bilawal	... ..	
(2) Bhimapalasi	... ..	Sohi rasana aur tarana.
(3) Kaushik Kanrha...	... ..	Dhan dhan dhan.
(4) Kafi	... ..	Udho kara man ki.
(5) Hamir	... ..	Kaun batave bat.

A. H. MACKENZIE, M.A., C.I.E.,

Director of Public Instruction, United Provinces.

ALLAHABAD :

February 29, 1932.

**Curriculum for the Upper Middle Section of Vernacular  
Schools for Girls, United Provinces, for 1932-23.**

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**SUBJECTS OF STUDY.**

*Compulsory Subjects.—*

1. Hindi or Urdu.
2. Arithmetic.
3. History.
4. Geography.
5. Domestic Science.

*Optional Subjects.—*

One of the following :—

1. Classical Language.
2. Second Vernacular.
3. English.
4. Advanced Course in Hindi or Urdu.
5.       "       "       in Mathematics.
6. Elementary Science.
7. Drawing.
8. Music.



**Curriculum for the Upper Middle Section of Vernacular  
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**HINDI OR URDU.**

CLASSES VII AND VIII.

*(Two years' course.)*

**(a) Reading:—**

The prescribed readers and books recommended for supplementary reading are given in Appendix I-A.

**(b) Grammar:—**

Revision of previous work.

Analysis and Synthesis of complex and compound sentences.

Simple figures of speech.

Punctuation.

Samas (in Hindi).

For text-books see Appendix I.

**(c) Composition:—**

To write descriptions of observed places, events, phenomena etc.  
Elaboration of outlines.

**ARITHMETIC.**

CLASSES VII AND VIII.

*(Two years' course.)*

Revision of past work by means of more advanced problems.

Compound interest.

Simple and compound proportion.

Percentages. Profit and loss.

Use of algebraic symbols.

Examples suitable for the illustration of principles may be selected from the following books:—

(1) A new Arithmetic for Indian Schools, by Workman and Sime  
(Rai Sahib Gulab Singh and Sons, Lahore),

or

(2) Senior Modern Arithmetic (Indian Press, Limited, Allahabad),  
Re. 1-8,

or

(3) Longman's Urdu Middle Arithmetic, Part III.

or

(4) Longman's Vernacular School Arithmetic, Hindi, Part III.

### HISTORY.

CLASSES VII AND VIII.

(Two years' course.)

1. Geographical features of India.
2. Aryans and Dravidians.
3. The Vedas and the old Aryan customs and manners. The Ramayan and the Mahabharat.
4. Jainism and Buddhism and their influence.
5. Alexander.
6. Chandragupta Maurya, description by Megasthenes.
7. Asoka.
8. Samudragupta, Vikramaditya, and Fa Hien.
9. Harsha Vardhan and Hieun Tsang.
10. Rajraj Chola.
11. The Rajput Kingdoms and early Muhammadan invasions.
12. Qutub-ud-din Altamash, Razia and Balban.
13. Ala-ud-din Khilji.
14. The Bahmani Kingdom and Vijayanagar.
15. Muhammad and Firoz Tughlak, Timur.
16. Babar.
17. Humayun and Sher Shah.
18. Akbar.
19. Jahangir, Shahjahan.
20. Aurangzabe.
21. Aurangzabe's successors and fall of Moghal Empire.
22. Shivaji and rise of Maharatta power.
23. The Sikhs and Ranjit Singh.
24. East India Company; its early possessions.
25. Contests of the English and the French for the supremacy of India, Clive, Dupleix. Battles of Plassey and Wandewash.

26. Warren Hastings and Madho Rao Scindia.
27. Cornwallis and Tippu Sultan.
28. Wellesley.
29. Hastings.
30. Bentinck.
31. Dalhousie.
32. Canning.
33. India under the Crown.
34. A brief description of the present system of administration.

**Text-books recommended :—**

Bharatwarsh ka Saral Itihas (Elementary History of India), Parts I and II, revised edition, by Dr. Ishwari Prasad, M.A., LL.B., D.Litt. published by Indian Press, Ltd., Allahabad, Part I Re. 1, Part II 14 annas.)

or

Tarikh Hind (Elementary History of India) Parts I and II, by Dr. Ishwari Prasad, M.A., LL.B., D.Litt., published by Indian Press, Ltd., Allahabad. (Part I, Re. 1, Part II, 14 annas.)

or

Bharat Varsha ka Itihas, by Pandey Ramavatar Sharma (Sahitya Ratnamala Karyalaya, Benares city),

or

Shalopayogi Bharatvarsha शालोपयोगी भारतवर्ष (Gandhi Hindi Pustak Bhandhar or Sahitya Bhawan, Limited, Allahabad.)

**GEOGRAPHY.**

**CLASSES VII AND VIII.**

(Two years' course.)

Study of the natural regions of other continents on the same lines as indicated for the study of Asia in Class VI, with special reference to the use man has made of his environment. Outline study of physiographic and distribution maps. Trade routes to and from India.

*Physical Geography.*—Revision of previous work. Latitude and longitude; practical work in the record and measurement of temperature and rainfall (where there are facilities); terrestrial and seasonal winds and the record of their changes; the seasons; the oceans; ocean currents and waves; tides; simple land forms; the wearing away and the building up of lands.

For books see Appendix II.

**DOMESTIC SCIENCE.**

**CLASSES VII AND VIII.**

(Two years' course.)

**(a) Physiology :—**

Skeleton, joints, muscles, internal organs (heart, lungs, kidneys, spleen, stomach, bladder).

Circulation of blood.

Brain and nerves.

(b) Hygiene :—

*Air*.—Need of pure air, impurities of air, ventilation.

*Water*.—Sources of water supply (springs, deep wells, surface wells, rivers, tanks) : how water is polluted, how to prevent pollution and how to purify water.

*Food*.—Composition of food, diet and its importance, value of milk. Preservation of food and milk. Drinks and condiments.

*Personal hygiene* :—

Cleanliness of body (hair, nails, teeth, etc.) and of clothing. Exercise and recreation importance of temperance, effects of *pan*, opium and other drugs : spitting.

*Precautions against disease* :—

Infectious diseases (small-pox, measles, diphtheria etc.) Tuberculosis, pneumonia, enteric fever, dysentery and diarrhoea : cholera : plague, malaria, itch, leprosy, ophthalmia (sore eyes.)

(c) First Aid :—

Bandaging, (scalp forehead, eyes, nose, hand, foot, chest, back, elbow, knee).

Burns, scalds, bruises sprains.

Fainting, sunstroke suffocation, foreign bodies in eye, ear, nose and throat, simple cases of bleeding. Bites of mad dogs and signs of madness in dogs. Snake bites. Stings.

(d) Home Nursing :—

Bedding, furniture, light, warmth, ventilation. Kind of food and way of giving it.

Administration of medicine, changing of garments and bedding, washing the patient.

Rest and sleep.

Infectious illness. Precautions during illness, disinfection of room, clothing and bedding : use of disinfectants. Convalescence—occupation, visitors, rest, sleep and food.

Use of simple remedies :—

(1) Leaves of nim and castor oil plant, etc., chiretta, mustard oil, tincture of iodine, boracic acid, alum, permanganate : camphor, remedies for toothache.

(2) Poultices. Plasters. Fomentations. Use of ice.

(e) **Care and training of children :—**

Food, clothing, rest, sleep, play, exercise, cleanliness.

(f) **Household management :—**

Cleansing and care of house and furniture.

Disposal of refuse and sewage.

Means of eliminating flies, mosquitoes, bugs, fleas.

Care of kitchen.

Choice and care of clothing. Methods of washing cotton, woollen and silk clothing—(practical work should be done if possible).

For text-books see Appendix III.

(g) **Sewing :—**

Practice in work already learned. To cut out at least four garments to given measurements for both adults and children, the garments to be chosen from lists in Lower Middle sewing course.

Optional

(a) Knitting—vests, stockings, jumper. etc.

(b) Embroidery.

(h) **Cooking (optional).**

Cooking of four or more of the following :—

Tikona, gujia, bara zarda, mutanjan, dopiyaza.

Optional-cooking of sweetmeats.

Calculation of quantities required for cooking for families of different size.

Arrangement of work in order to economise time and fuel.

Arrangement of kitchen appliances.

**One of the following Subjects.**

**I.—Classical Language.**

One of the following classical languages : Sanskrit, Persian, Arabic.

CLASSES VII AND VIII.

(Two years' course.)

(a) **Reading :—**

To read with correct pronunciation and fluency from a reader. To use words of the reader in simple sentences and to answer in the classical language questions based on the matter in the reader.

(b) **Writing :** Writing to dictation or transcription.

(c) **Grammar.**

The conjugations and declensions commonly used in the text-book.  
Samas and Sandhi. (Sanskrit.)

Simple parsing and elementary analysis. (Arabic and Persian.)  
For text-book see Appendix IV.

### Second Vernacular.

#### CLASS VII.

*Reading.*—(a) To read at sight from the text-book: to explain the words and sentences; and to give the substance of lessons in their own words. Recitation.

(b) *Grammar.*—The following is a two years' course for classes VII and VIII.

To distinguish.—Nouns, pronouns, adjectives, verbs and adverbs.

Gender, number and case (nominative and objective cases) only of nouns.

Transitive and Intransitive. Verbs. Three main tenses of verbs.

2. *Composition.*—To write short stories and descriptions, and to write letters (including letters of invitation) with short and simple forms of address.

3. *Writing.*—To write passages to dictation from the text-book or from books of equal difficulty in Urdu or Nagri character. Copy-slips to be shown.

#### CLASS VIII.

1. *Reading.*—(a) To read at sight from the text-book and to explain words, allusions, and sentences. To summarise the subject-matter of the lessons in their own words. Recitation.

(b) *Grammar.*—See course Class VII.

(2) *Composition.*—To write short stories and descriptions, and to write letters (including letters of invitation) with short and simple form of address.

3. *Writing.*—To write passages to dictation from a book of equal difficulty with the text-book in Urdu or Nagri character. Copy-slips to be shown.

For text-books see Appendix V.

### ENGLISH.

#### CLASS VII.

(a) *Conversation, reading and recitation.*—To carry on simple conversation in English; to read with correct pronunciation from a reader; to use the words of the reader in simple sentences; to answer

in English questions based on the matter in the reader; to recite simple poems with action.

(b) *Dictation and writing*.—Dictation, in ruled books, of words and sentences previously read in the reader; writing in copy-books; transcription from the reader.

(c) *Grammar and composition*.—Parts of speech without sub-classification; number and gender of nouns and pronouns; the use of the three simple tenses. Oral and written exercises on the above.

(d) *Written composition*.—e.g., using the words and phrases of the reader in simple sentences, description of pictures and objects.

#### CLASS VIII.

(a) *Conversation reading and recitation*.—To carry on simple conversation in English; to read with correct pronunciation from a reader; to use the words of the reader in simple sentences; to answer in English questions based on the matter in the reader; to recite from memory passages chosen from the reader.

(b) *Dictation and writing*.—Dictation in ruled books, of passages chosen chiefly from the reader; writing in copy-books of transcription from the reader.

(c) *Grammar and composition*.—Revision of previous work in grammar; nouns in apposition; cases of nouns and pronouns: direct and indirect objects; verbs, number and person; transitive and intransitive; participles; use of tenses; analysis of simple sentences, oral and written exercises on the above.

(d) *Written composition*.—e.g., the use of the words and phrases of the reader in simple sentences; reproduction of simple stories; practice in answering easy questions on the subject-matter of the text; description of pictures and objects; punctuation.

For text-books see Appendix VI.

#### ADVANCED COURSE IN HINDI OR URDU.

For text-books see Appendix VII.

#### ADVANCED COURSE IN MATHEMATICS.

##### ARITHMETIC.

##### CLASSES VII AND VIII.

(Two years' course.)

Units of length in British and metric systems; calculations, measurement of straight lines, measurement of curved lines, rules for the length of the circumference of a circle; units of areas in British and metric systems; rules for area of a rectangle; use of squared paper to find the area of figures other than rectangles; formula for the area of

a triangle; units of volume in British and metric systems; rules for the volume of a rectangular solid; units of weight in British and metric systems; compound proportion proportional parts; oral and written problems on the above with attention to approximation.

Examples suitable for the illustration of principles may be selected from the following books :—

(1) A New Arithmetic for Indian Schools, by Workman and Sime (Rai Sahib Gulab Singh & Sons, Lahore.)

or

(2) Senior Modern Arithmetic (Indian Press, Limited, Allahabad), Re. 1-8.

or

(3) Longman's Urdu Middle Arithmetic, Part III.

or

(4) Longman's Vernacular School Arithmetic, Hindi, Part III.

### ALGEBRA.

#### CLASSES VII AND VIII.

(Two years' course.)

Symbolical expression; substituting; brackets; addition; subtraction; easy multiplication; easy division; simple equations with one unknown quantity, graphs of straight lines; easy simultaneous equations involving two unknown quantities, problems involving the above.

Examples suitable for the illustration of principles may be selected from the following books :—

(1) Baker and Bourne's Shorter Algebra (Bell & Sons).

or

(2) Hall's School Algebra for Indian Schools, Part I (Macmillan & Company).

### GEOMETRY.

#### CLASSES VII AND VIII.

(Two years' course.)

I.—The following theorems should be taught, but no formal proofs should be asked in examination :—

- (1) If a straight line stands on another straight line, the sum of the two angles so formed is equal to two right-angles, and the converse.
- (2) If a straight line cuts two other straight lines and a pair of corresponding angles are equal, the two straight lines are parallel, and the converse.

- (3) If two triangles have two sides of the one equal to two sides of the other, each to each, and also the angles included by those sides equal, the triangles are congruent.
- (4) If two triangles have two angles of the one equal to two angles of the other, each to each, and also a side of the one equal to the corresponding side of the other, the triangles are congruent.
- (5) If two triangles have three sides of the one equal to three sides of the other, each to each, the triangles are congruent.
- (6) The area of a rectangle is measured by the product of the measure of its sides.

## II.—Problems and practical work—

- (1) To bisect a given angle.
- (2) To bisect a given straight line.
- (3) To construct a perpendicular to a given straight line (i) from a given point in the line; (ii) from a given point outside the line.
- (4) To construct an angle equal to a given angle.
- (5) To divide a straight line into any number of equal parts or in a given ratio.
- (6) The construction of angles of  $50^\circ$ ,  $45^\circ$ ,  $30^\circ$ .
- (7) The construction of triangles and quadrilaterals from sufficient data.
- (8) The construction of a rectangle equal in area to a given rectangle and having one side of given length.

## III.—Theorems to be studied with proofs and riders—

- (1) If two straight lines intersect the vertically opposite angles are equal.
  - (2) When a straight line cuts two other straight lines (i) if a pair of alternate angles are equal or (ii) a pair of interior angles on the same side of the cutting line are together equal to two right-angles then the two straight lines are parallel.
  - (3) The converse of the above.
  - (4) Straight lines which are parallel to the same straight line are parallel to one another.
  - (5) The sum of the angles of a triangle is equal to two right-angles.
- Cor.* 1. If one side of a triangle is produced the exterior angle so formed is equal to the sum of the interior opposite angles.
- Cor.* 2.—If two triangles have two angles of the one equal to two angles of the other, each to each, then the third angles are equal.

*Cor. 3.* In a right-angled triangle (i) the right-angle is the greatest angle and (ii) the sum of the remaining angles is equal to a right-angle.

(6) In a polygon of  $n$  sides the sum of the interior angles is equal to  $2n$ —a right-angles.

*Cor. 4.* If the sides of a convex polygon are produced in order the sum of the angles so formed is equal to four right-angles.

(7) If two sides of a triangle are equal the angles opposite to these sides are equal.

(8) The converse of the above.

(9) If two triangles have two sides of the one equal to two sides of the other, each to each, and the angles opposite to one pair of equal sides are right-angles, the triangles are congruent. (Ambiguity to be discussed.)

(10) Of all straight lines that can be drawn to a given straight line from a given point outside it the perpendicular is the shortest.

(11) The opposite sides and angles of a parallelogram are equal; each diagonal bisects the parallelogram and the diagonals bisect one another.

(12) The converse of the first, second, and the fourth parts of the above (11).

(13) Straight lines joining the extremities of parallel and equal straight lines on the same side are also parallel and equal.

(14) The area of a parallelogram is equal to the area of a rectangle on the same base and between the same parallels.

*Cor. 1.* The area of a parallelogram is measured by the product of the measure of its base and altitude.

*Cor. 2.* Parallelograms on the same or equal bases and of the same altitude are equal in area.

(15) The area of a triangle is equal to one-half the area of a rectangle on the same base and between the same parallels.

*Cor. 1.* The area of a triangle is measured by one-half the product of the measures of its base and altitude.

*Cor. 2.* Triangles on the same base or equal bases of the same altitude are equal in area.

*Cor. 3.* Converse of the above.

(16) If a parallelogram and a triangle stand on the same base and between the same parallels, the area of the parallelogram is double that of the triangle.

(17) The sum of the squares on the two sides of a right-angled triangle containing the right-angle is equal to the square on the hypotenuse; and its converse.

**Text-book prescribed :—**

- (1) Parkinson and Pressland : A Primer of Geometry (Clarendon Press, Oxford), (Indian edition), Re. 1-12,  
or  
(2) Middle School Geometry for classes VII and VIII, by Shiva Nath Singh (Indian Press, Limited, Allahabad), Re. 1,  
or  
(3) Pierpoint's Elements of Geometry, Part I, Experimental Section, Urdu and Hindi editions (Indian Press, Limited, Allahabad),  
or  
(4) A Shorter School Geometry, Part I (new edition), by Hall and Stevens (Macmillan & Company),  
or  
(5) High School Geometry, Part I, by Paranjpe (Macmillan & Company).

**ELEMENTARY SCIENCE.**

**CLASS VII.**

The use of text-books by girls should be introduced at this stage.; they are not required earlier.

(a) *Measurements*.—Volumes of regular solids; use of graduated cylinder and burette in measuring volumes of liquids and of small solids.

(b) *Physics*.—Use of physical balance to find mass; weights of 1 c. c. of various substances (both solid and liquid); idea of density; experiments of expansion and contraction of solids and liquids, subject to heating and cooling; construction and explanation of principle of thermometer; finding the boiling point of water by Fahrenheit and Centigrade thermometers.

(c) *Chemistry*.—Examination of common substances with particular attention to solubility and effect of heat; the three states of matter; change of state; the indestructibility of matter.

(d) *Plant life*.—Fruit, dispersal of fruit and seeds, the food material in seeds to be tested, flowers, adaptation to various ways of pollination.

NOTE.—Museum work to be continued.

**CLASS VIII.**

(a) *Common machines*.—Demonstration of the use of pulley, pump, machines used locally for lifting water (Persian wheel, etc.).

(b) *Physics*.—Pressure; pressure exerted by liquids and gases with demonstration by simple experiments; the barometer and measurement.

of air pressure. Levers, principle of the balance, double weighing; extension of a spring and the spring-balance. Specific gravity of solids and liquids by means of the density bottle. Archimedes' principle applied to sinking as well as floating bodies and its application to find Specific Gravity; use of the U-tube to find Specific Gravity; numerical examples on the foregoing. Comparison of thermometers, experimentally, graphically and by calculations; conduction, convection and radiation.

(c) *Chemistry*.—Water; formation when fuel (candle, oil, etc.) burns; examination of the gas (hydrogen) formed when water (steam) is passed over red-hot iron, examination of rusted iron, and conclusion that water contains hydrogen; composition of water with demonstration by electrolysis; hard and soft water, Carbon—as a constituent of coal, wood, sugar, etc., (shown by charring) and of oil (shown by soot given off); carbon dioxide—the result of combustion, tested with lime water; carbon dioxide, a constituent of air given out by respiration. Acids and alkalis tested by litmus. Constituents of sugar (starch, fat, protein; tests of such food materials as grain; dal, oilseed (starch gives a dark-blue colour with iodine solution; protein gives a yellow-brown colour; fat makes a grease spot when rubbed on paper or when a drop of solution of fat in ether is evaporated on paper).

(d) *Plant life*.—Leaves—arrangement with reference to light; food-making (test with iodine solution after clearing with hot alcohol), upper and lower sides of leaves.

**Book recommended for teacher:—**

Zamindar our uske Dushman kire, Part I, published by Messrs. Utar Chanda Kapoor and Sons Anarkali, Lahore.

**List of experiments for Physics and Chemistry in Elementary Science, including Nature Study, for Classes VII and VIII.**

CLASS VII.

**PHYSICS.**

*Measurement of volume.*

1. Find the volume of cubical, cylindrical, spherical and irregular solids by the use of graduated vessels.
2. Find the capacity of a large flask; of a small bottle.

*Measurement of mass.*

3. Use of the physical balance.
4. Find the mass of various common objects, e.g., of a rupee; of 1 c.c. of wood, iron, copper, etc.; of 1 c.c. water, oil, milk, etc.
5. Find the volume of a bottle or flask by weighing.
6. Compare the Indian, English, and C. G. S. units of weight.
7. Test bazar weights for accuracy.

*Heat and temperature.*

8. Show that solids (as an iron rod) expand on heating and contract on cooling. Application to iron bridges and railway rails. (Accurate measurement of co-efficient of expansion should not be attempted here.)
9. Show that a liquid expands on heating and contracts on cooling.
10. Show that a gas (air) expands on heating and contracts on cooling.
11. Construct a thermometer (mercury or alcohol).
12. Find the boiling point of water in Fahrenheit and Centigrade degrees.

**CHEMISTRY.**

*Matter and its three states.*

1. Examine the properties (such as colour, odour, solubility in water, effect on litmus if soluble, effect of heat, etc.) of common substances, such as chalk, salt, sulphur, iron, copper sugar, soda, copper sulphate, iron sulphate, etc.
2. Determine the solubility of common substances, at ordinary (and raised) temperature (i.e., warm water can dissolve more of a salt than cold water).
3. Show that there is no loss of weight when a substance dissolves in water, and that by evaporation the substances can be recovered in original form.
4. Make crystals from saturated solutions of sugar, alum, nitre, copper sulphate, etc.
5. Examine the three states of matter, as illustrated by water.
6. Show that matter is indestructible (e.g., by burning a weighed candle and weighing the products). (Burn a candle under a tightly-sealed bell jar until the oxygen is used up: since none of the products can escape, weight should remain constant.)

**PHYSICS.**

**CLASS VIII.**

*Pressure.*

1. Show that the pressure of a liquid varies with depth.
2. Show that a liquid exerts pressure equally in all directions.
3. Show that air has weight.
4. Show that air presses equally in all directions.
5. Principle of the barometer. Make a simple barometer, and measure air pressure.
6. Show that the up-thrust on a solid immersed in water is equal to the weight of the water displaced by the body.
7. Find by Archimedes' principle the specific gravity of a solid which sinks in water; which floats on water.

*Levers and the balance.*

8. Study the principle of the balance by means of simple apparatus. Make a balance.
9. Find the weight of a body by means of double weighing.
10. If possible, test bazar balances for accuracy.
11. Find the weight of a body by means of a spring balance.

*Specific gravity.*

12. Find the specific gravity of a salt solution (or other liquid) by means of a density bottle.
13. Find the specific gravity of small solids by means of a density bottle.
14. Find the specific gravity of a liquid by means of a U-tube.

*Thermometry.*

15. Find the temperature of boiling water and of melting ice by both Fahrenheit and Centigrade thermometers.
16. Compare the scales of the two thermometers; illustrate by means of a graph. (The principle and use of the graph should be explained here.)

*Movement of heat.*

17. Show that heat is conducted through a solid.
18. Show that all solids are not equally good conductors of heat.
19. Show that water is a poor conductor of heat; that mercury is a good conductor.
20. Show how convection takes place in liquids (e.g., by means of potassium permanganate).
21. Show how convection takes place in gases (by means of smoke in the air over a lamp or candle).
22. Convection in nature :—
  - (a) The water of lakes.
  - (b) Air over heated land surfaces.
23. Movement of heat by radiation. (Heat from a fire; from the sun.)
24. Applications of the three methods of heat transference :—
  - (a) A cooking fire.
  - (b) Heat from the sun and its distribution over the earth.
  - (c) Cooling of the human body by perspiration.
  - (d) Air temperatures over land and water.
  - (e) Temperature of the soil at various depths.
  - (f) The use of clothing.
  - (g) Temperature inside and outside a house.

## CHEMISTRY.

### *Combustion.*

1. Show that burning (of a candle or lamp) cannot take place without air.

### *Examination of air.*

2. Show that air contains a gas that supports combustion, and an inert gas. (Burn phosphorus under a bell jar or graduated cylinder, and find out the approximate proportion of oxygen and nitrogen.)

### *Water.*

3. Show that water contains hydrogen by studying the gas formed when steam is passed over red-hot iron. Examine the rusted iron. Natural rusting of iron. (This experiment may be supplemented by examination of the gas formed when sodium is burned in water.)

4. Show by hydrolysis that water contains oxygen and hydrogen.

### *Hard and soft waters.*

5. Show that water from wells and rivers contains dissolved substances.
6. Show that rain-water contains very little dissolved substances.
7. Effect of boiling hard water: application to steam engines.
8. "Hard" and "soft" water and the lathering of soap.
9. Methods of softening hard waters.

### *Carbon.*

10. Show by charring or the formation of soot that various organic substances (wood, coal, sugar, oil, etc.) contain carbon.

### *Carbon dioxide.*

11. Test the products of burning by means of lime water to show the presence of carbon dioxide.
12. Show the presence of carbon dioxide in the breath. In air. Regulation of amount of carbon dioxide in the air by green plants.
13. Air pollution; carbon dioxide from respiration of animals, cooking fires, burning, factories, etc., carbon from fires, oil lights in bazars and factories.

### *Acids and alkalis.*

14. Examine common acids (as hydrochloric, sulphuric and nitric) for appearance, smell, taste, effects on litmus, and other common properties.
15. Examine ammonia, sodium or potassium hydroxide, and other common alkalis for their common properties.
16. Show the neutralizing effects of acids and alkalis.
17. Common occurrence of acids and alkalis (as in fruits, vinegar, "reh," etc.).

*Composition of common food materials.*

18. Test by charring for presence of carbon.
19. Test by burning for presence of water (i.e., hydrogen).
20. Test by burning for presence of carbon dioxide (i.e., oxygen).
21. Test by odour of burning for presence of nitrogen.
22. Test common food materials for :—
  - (a) Starch, indicated by means of iodine solution.
  - (b) Fats, indicated by means of a grease spot on paper.
  - (c) Protein, indicated by means of iodine, or by the peculiar odour when burned.

23. Understand that these food materials are burned in the body to give energy, and that the carbon dioxide in the breath is evidence that combustion has taken place.

NOTE.—This list of experiments is intended to indicate the direction in which the teacher can develop his course of practical work, rather than to give a detailed list of experiments, each of which must be done, and beyond which nothing may be done. The experiments should be used to explain simple facts and experiences of every day life.

*(h) Elementary Science.*

The following is suggested as the most desirable method of carrying out the experiments in Elementary Science, for Classes VII and VIII :—

			Demonstration by teacher.	Performed by students.	Observation and discussion of natural phenomena	One experiment by entire class.
CLASS VII.						
<i>Physics—</i>						
Exps. 1—6 ..	..	..	..	×	..	..
Exps. 7—11 ..	..	..	×	×	..	..
Exp. 12 ..	..	..	..	×	..	..
<i>Chemistry—</i>						
Exps. 1—4 ..	..	..	..	×	×	..
Exps. 5—6 ..	..	..	×	×	..	..
CLASS VIII.						
<i>Physics—</i>						
Exps. 1—5 ..	..	..	×	×	..	..
Exps. 6—7 ..	..	..	×	×	×	..
Exps. 8—16 ..	..	..	..	×	×	..
Exps. 17—21..	..	..	×	×	×	..
Exps. 22—24..	..	..	..	×	×	×
<i>Chemistry—</i>						
Exp. 1 ..	..	..	..	×	×	..
Exp. 2 ..	..	..	×	×	×	..
Exp. 3 ..	..	..	×	×	×	×
Exp. 4 ..	..	..	×	×	×	×
Exps. 5—6 ..	..	..	..	×	×	×
Exp. 7 ..	..	..	×	×	×	×
Exp. 8 ..	..	..	..	×	×	×
Exp. 9 ..	..	..	×	×	×	×
Exps. 1—12 ..	..	..	..	×	×	×
Exp. 13 ..	..	..	×	×	×	×
Exps. 14—15..	..	..	×	×	×	×
Exps. 16—22..	..	..	..	×	×	×
Exp. 23 ..	..	..	..	×	×	×

Some of the experiments can best be performed and explained by the teacher; some can be demonstrated by the teacher and then performed by the students; some are intended for observation and discussion of natural phenomena; It is intended that the teacher shall use his judgment as to the most effective way of performing the experiments, having due regard to the nature and difficulty of the experiment, and to the amount of apparatus available.

Books recommended for the use of teachers :—

- (1) Bhautik aur Rasayan Shastra, Parts I and II, by Bhattacharya (Indian Press, Limited, Allahabad).
- (2) Vigyan Pravesika (Vernacular Science Society, Allahabad).
- (3) Nature Study in Hindi and Urdu, by D. N. Mukerji (Oxford University Press).
- (4) Fortey, Isabel C.: Plant studies for Indian Schools (Blackie and Son, Limited), 1921.

### DRAWING.

*(Course will be drawn up later.)*

### MUSIC.

#### CLASS VII.

1. Students should know (i) Tisri jati layakari.
2. (2) Aroh, Awaroh, Barjabarj and time of singing of Rag already learnt.
3. The following songs of the Rag given below should be taught :—

<i>Rag.</i>		<i>Songs.</i>	
(1) Bhairav	...	(i) Aj Nand Lal	... (ii) Jago Brijraj.
(2) Asawari	...	(i) Sumer ho	... (ii) Bhor kayi milan.
(3) Bilawal	...	(i) Tuhi ad nad	... (ii) Sumiran karman
(4) Sarang	...	(i) Madhu madan	... (ii) Bando sant asjjan.
(5) Bhairvi	...	(i) Ninidhadhapap	... (ii) Sundar Sarup ja ke.

#### CLASS VIII.

1. The following are the songs and Rag to be taught :—

<i>Rag.</i>		<i>Song.</i>	
(1) Gurh Sarang	Tarana		
(2) Bhim Palasi ..	(i) Nirakh madan	...	(ii) Mil jana,
(3) Pilu	Kanha ne aisi re.		
(4) Kafi	Mapsandhanip.		
(5) Purbi	Hariye mainko.		
(6) Bagesari	(i) Binti suno mori...	(ii)	Jay jay jay.
(7) Hindol	Shyam moso		
(8) Srirag	Gauri aradhang.		

2. Students should be taught to sing Alap of some of the popular Rag.

For books and instructions to teachers see Appendix VIII.

APPENDIX I.

**Text-book prescribed in Hindi for Class VII:—**

(1) Sahitya-Latika, Part III, by Dr. Ram Prasad Tripathi (School Book and Apparatus Dépôt, Lucknow),

*or*

(2) Hindi-Kusumavali, Part I (Indian Press, Limited, Allahabad), annas 10,

*or*

(3) Sahitya-Saroj, by Chaturvedi Dwarka Prasad Sharma (Ram Narain Lal, Allahabad), annas 10.

**Recommended for supplementary reading in Hindi:—**

Mahadeo Govind Ranade, by Pandit Ram Narain Misra (Nagri Pracharini Sabha, Benares).

*or*

Gadya Maladarsh, by Jiwan Shankar Yajnik, 1922 edition, published by Ram Prasad and Brothers, Agra. (12 annas).

*or*

Sita Charit, 9th edition (1921), published by Indian Press, Limited, Allahabad. (Rs. 2).

**Text-book prescribed in Hindi for Class VIII:—**

(1) Sahitya-Latika, Part IV, by Dr. Ram Prasad Tripathi (School Book and Apparatus Dépôt, Lucknow),

*or*

(2) Hindi-Kusumavali, Part II (Indian Press, Limited, Allahabad), annas 10,

*or*

(3) Hindi-Ratna-Sangrah by Sudarshan Acharya (Griha Lakshmi Karyalaya, Allahabad), annas 10.

**Recommended for supplementary reading in Hindi:—**

(1) Galpa Guchha, Part I (Indian Press, Limited, Allahabad), annas 12,

*or*

... (2) Singh Garh Vijai. (Abhyudaya Press, Allahabad).

*or*

Anna Purna ka Mandir by Ishwari Prasad Sharma Misra, 4th edition (1927), published by Hindi Granth Ratnakar Karyalaya, Bombay (Re. 1).

*or*

Bharat Ramni (Samajik Natak), by Divijindra Lal Rai, 3rd edition (1929), published by Hindi Granth Ratnakar Karyalaya, Bombay. (14 annas).

**Text-books prescribed in Urdu:—**

**CLASSES VII AND VIII.**

اردو کورس آٹھویں جماعت کے لیے compiled by Sir Mohammad Iqbal and Hakim Ahmad Shujah (Gulab Chand Kapur and Sons, Lahore),

or

Gulistan-i-Adab, Part III, for Class VII (Agra Publishing House), 1928, annas 10.

Gulistan-i-Adab, Part IV, for Class VIII (Agra Publishing House), 1928, annas 10.

**Recommended for teachers' use:—**

Alankar Manjusha, by Bhagwan Din, published by Ram Sahai Lal, Book-seller, Gaya. (Re. 1 annas 4).

Sahitya Samalochana, by Professor Ram Knunwar Varma, M.A., M.R.A.S., published by Sahitya Mandir, Daraganj, Allahabad, (Re. 1).

Adbhut Sansar, Part II, by Munshi Lal Agarwala, published by Macmillan and Co., Calcutta. (12 annas).

or

Madhya Hindi Rachana by Kamta Prasad Guru, published by Ram Narain Lal, Katra, Allahabad. (8 annas).

Shiksha Vidhi (Art of teaching) by Gopi Lal Mathur, B.A., C.T., published by Prem Hansa Lal Mathur, Narhi, Hazratganj, Lucknow (Re. 1 anna 8).

**Recommended for supplementary reading in Urdu:—**

**CLASS VII.**

Qasis Hindi , (Rai Sahib M. Gulab Singh and Sons, Lahore).

or

Siहत-i-Zamin (Anwarul Matabe, Lucknow).

or

Raj Dulari by Brij Mohan Dattatriya Kaifi (Pandit Pairay Mohan, Bansmandi, Anarkali, Lahore).

or

Binatun Nash by Muhammad Nazir Ahmad Khan, late Deputy Collector, 1926 edition, published by Newal Kishore Press, Lucknow. (6 annas).

or

Ganjina-i-Akhlaq, Part II, by Pir Gulam Dastgir Nami, 1929 edition, published by Talib Ali Paband Qureshi, Proprietor, Akhbar Talim, Lahore. (11 annas).

or

Miratul Urus by Muhammad Nazir Ahmad Khan, late Deputy Collector, 1920 edition, published by Newal Kishore Press, Lucknow. (7 annas).

or

Namuna-i-Ibrat, Part I by Muhammad Aziz Ullah, 1928 edition, published by Nizam-ud-din Hasan and Sons. Nazami Press, Budaun. (12 annas).

CLASS VIII.

Jalwai Isar  
Limited, Allahabad).

by Munshi Nawab Rai (Indian Press,

or

Nasihath-ka-karanphool by Maulana Azad  
(Khalifa Syed Mohammad Salim, Manager, Azad Book Dépôt, Akbari-  
mandi, Lahore).

or

Sad Darshan

(Newal Kishore Press,, Lucknow).

or

Binatun Nash, by Muhammad Nazir Ahmad Khan, late Deputy  
Collector, 1926 edition, published by Newal Kishore Press, Lucknow.  
(6 annas.)

or

Ganjina-i-Akhlaq, Part II, by Pir Ghulam Dastgir Nami, 1929  
edition, published by Talib Ali Paband Qureshi, Proprietor, Akhbar

or

Talim, Lahore. (11 annas.)

Miratul Urus, by Muhammad Nazir Ahmad Khan, late Deputy  
Collector, 1920 edition, published by Newal Kishore Press, Lucknow.  
(7 annas.)

or

Namuna-i-Ibrat, Part I, by Muhammad Aziz Ullah, 1928 edition,  
published by Nizam-ud-din Hasan and Sons, Nizami Press, Budaun.  
(12 annas.)

Grammars recommended in Hindi :—

CLASSES VII AND VIII.

1. Bhasha Vyakaran Bodh, by Pandit Chandra Mauli Shukul  
(Nand Kishore and Brothers, Benares),

or

2. Hindi Vyakaran, Parts I and II, by Ganga Prasad (Rai Sahib  
Ram Dayal Agarwala, Allahabad),

or

3. Madhya Hindi Vyakaran, by Pandit Kamta Prasad Guru  
(Kashi Nagri Pracharini Sabha, Benares).

Grammar recommended in Urdu :—

CLASSES VII AND VIII.

افضل القواعد by Maulvi Fateh Muhammad Khan (Messrs. Attar  
Chand Kapur and Sons, Lahore).

APPENDIX II.

*Books for use in Geography in Classes VII and VIII.*

National Press ka Vernacular School Jughrafia or Bhugol, Part IV, by Munshi Lal Agarwala, published by the National Press, Allahabad. (12 annas each.)

or

Vernacular School Jughrafia or Bhugol, Part IV, revised 1930 edition, by Madan Lal Jain, published by Macmillan & Co., Ltd., Calcutta. (Urdu Re. 1-6-0; Hindi Re. 1.)

or

Longman's Vernacular School Jaghrafia, Part IV (Revised edition), (Urdu and Hindi), by H. B. Wetherill, M.A., published by Messrs. Longman Green & Co., (Re. 1 annas 4).

The following atlases are adopted for use in Classes VII and VIII:—

सू चित्रावली  
المعالم  
Published by the Arts Publishers, 8, Park Road, Allahabad. Hindi and Urdu edition, price Re. 1 each.

Reference books for teachers :—

Indian Press ke Naye Jugrapheon ka Silsila, Part IV, published by Indian Press, Allahabad (12 annas).

Bahar-i-Jugrafia or Bhugol Vinod, Part IV, published by Rai Sahib Lala Ram Dayal Agarwala, Allahabad. (14 annas).

Longman's Urdu Atlas, 1929 edition, published by Longmans, Green & Co., Ltd., Calcutta. (12 annas.)

Modern School Atlas, Urdu or Hindi, published by the School Book and Apparatus Dépôt, Lucknow. (Re. 1 each.)

Jughrafia-i-Hindustan in Urdu, by Ram Narain Misra, published by Bhugol Karyalaya, Allahabad, (Rs. 2).

Bharat Varsh Ka Bhugol, by Ram Narain Misra, published by Bhugol Karyalaya, Allahabad, (Rs. 2).

Longman's Indian Atlas in Hindi, published by Longman Green and Company, Ltd., 6, Old Court House Street, Calcutta. (12 annas).

APPENDIX III.

Books for use in Domestic Science Course.

*For students' reference.*

Personal and Domestic Hygiene for the School and Home (in Hindi and Urdu), by Messrs. Harold Hendley (Rai Sahib Gulab Singh and Sons, Lahore).

Indian Manual of First-aid in Hindi and Urdu (St. John's Ambulance Association).

Indian Manual of home nursing in Hindi and Urdu (St. John's Ambulance Association).

*For teachers' reference.*

Physiology, Hygiene and First-aid, Longmans' Green and Co., Bombay.

The Child (Chapters IV. and V), Drummond. Dent and Sons.

Domestic Science for High Schools in India. Needhan. (Oxford University Press.)

Garhasthya Shashtra, by Pandit Lakshmidhar Bajpai, 2nd edition published by Tarun Bharat Granthawali Karyalaya, Daraganj, Allahabad. (Re. 1.)

Silai darpan, or Silai ki Kitab, Part I (Hindi and Urdu), by Srimati Laiq-un-Nisa, published by Rae Sahib Ram Dayal Agarwala, Allahabad (Rs. 2.)

Home Nursing, by Lady Patric and Dr. Ruth Young, M.B.E., W.M.S., published by St. John Ambulance Association, India Council. (12 annas).

Bimaron ka Khana, by Muhtarima Amina Nazil, published by Raziqul Khan, editor, Asmat, The Asmat Office, Delhi. (10 annas).

Swasthya aur Dirghayu, by A. C. Selmon, M.D., published by Oriental Watchman. Publishing House, Salisbury Park, Poona, (Rs. 1 cloth binding, Rs. 6, Keratol).

APPENDIX IV.

Text-books in Classical Languages.

Sanskrit :—

(1) Sanskrit Reader, Parts II and III, by Pandit Sarda Prasad Bhattacharya. (Ram Narain Lal, Allahabad.)

or

(2) Sanskrit Reader and Grammar, Parts II and III (Ram Narain Lal, Allahabad).

Grammar :—

(1) Sanskrit Vyakaranaki Upakramanika, by Pandit Iswar Chandra Vidyasagar (Ram Narain Lal, Allahabad).

(2) Elementary Grammar by Babu Ram Saksena.

Supplementary reading for Class VIII only.

Isapakatha by Chandrika Prasad, M.A.

or

Sanskrit Prabodhini, Part II, by Babu Ram Saksena.

Persian :—

Class VII.—Text-book :—Persian Middle Course (i) Prose, pages 25 to 56, (ii) Poetry, pages 1 to 35.

Grammar :—Persian Grammar for Middle schools Sarf, pages 1 to 107.

Class VIII.—Text-book :—Persian Middle Course—

(i) Prose, pages 67 to 108.

(ii) Poetry, pages 36 to 66.

(2) Intikhab-i-Farsi Jadid by Mirza Qudratullah (Oriental Publishing House, Lucknow).

Grammar :—Persian Grammar for Middle schools, Nahv, pages 108 to 193.

Arabic :—

Class VII.—Text-book :—Arabi-ki-Dusri Kitab, pages 1—53.

(b) Grammar :—Kitabus Sarf, pages 91—126.

Kitabun Nahv, pages 16—38.

Class VIII.—(a) Text-book :—Arabi-ki-Dusri Kitab, pages 54—120.

Grammar :—Kitabun Nahv, pages 39 to 85.

Recommended for teachers' use :—

Lam'at Munir Yani Munirul Lughat, by Muhammad Munir, published by Haji Muhammad Shafee Majidi Press, Cawnpore. (Rs. 2.)

APPENDIX V.

Text-books in Second Vernacular.

CLASS VII.

*Urdu.*—First half of Upper Primary Girls Reader by M. B. Hill, Indian Press, Allahabad (9 annas); or Bal Chandrika, Part III, by Vinapani, published by the Hindi Press, Allahabad, 1928 edition. (Inferior quality of paper—5 annas; superior quality of paper—5 annas 6 pies.)

or

Upper Primary Reader for Girls for Class III, published by the Newal Kishore Press, Lucknow. (4 annas 9 pies.)

*Hindi.*—First half of Upper Primary Girls Reader, by M. B. Hill, Indian Press, Allahabad (9 annas); or Bal Chandrika, Part III, by Vinapani, published by the Hindi Press, Allahabad, 1928 edition. (Inferior—5 annas; superior—5 annas 6 pies.)

or

Upper Primary Reader for Girls for Class III, published by the Newal Kishore Press, Lucknow. (4 annas 6 pies.)

CLASS VIII.

*Urdu.*—Second half of Upper Primary Girls Reader, by M. B. Hill, Indian Press, Allahabad (9 annas); or Bal Chandrika, Part IV, by Vinapani, published by the Hindi Press, Allahabad, 1928 edition. (Inferior quality of paper—5 annas; superior quality of paper—5 annas 6 pies.)

or

Upper Primary Reader for Girls for Class IV, published by the Newal Kishore Press, Lucknow. (4 annas 6 pies.)

*Hindi.*—Second half of Upper Primary Girls Reader, by M. B. Hill, Indian Press, Allahabad (9 annas); or Bal Chandrika, Part IV, by Vinapani, published by the Hindi Press, Allahabad, 1928 edition. (Inferior—5 annas; superior—5 annas 6 pies.)

or

Upper Primary Reader for Girls for Class IV, published by the Newal Kishore Press, Lucknow. (4 annas 3 pies.)

APPENDIX VI.

English for Class VII.

Text-book prescribed :—

Modern Indian Readers, Book II (Macmillan and Company, Limited), annas 6,

or

Third Direct Method English Reader, by Llewelyn Tipping (Macmillan and Company, Limited), annas 10,

or

New English Course for Indian Schools, second year reading book (Longmans, Green and Company),

or

Indian Class Reader II, by P. C. Wren (K. and J. Cooper, Bombay),

or

The New Method Readers (New Series), Reader II, by Michael West (Longmans, Green and Company).

Recommended for supplementary reading :—

The "A. L." Bright Story Readers, Grade P (E. J. Arnold and Son, Limited).

English for Class VIII.

Text-book prescribed :—

Modern India Readers, Book III (Macmillan and Company, Limited), annas 8,

or

Fourth Direct Method English Reader, by Llewelyn Tipping (Macmillan and Company, Limited), annas 14,

or

New English Course for Indian Schools, third year reading book (Longmans, Green and Company),

or

Indian Class Reader, III, by P. C. Wren (K. and J. Cooper, Bombay),

or

The New Method Readers (new series), Reader III, by Michael West (Longmans, Green and Company).

Recommended for supplementary reading :—

The "A. L." Bright Story Readers, Grade I (E. J. Arnold and Son, Limited),

or

Young India Readers, Grades I and II (Oxford University Press),

or

The New Method Readers (new series), Supplementary Reader I, by Michael West (Longmans, Green and Company).

## APPENDIX VII.

## Text-books for advanced language course.

*Urdu :—*

Jawahirat-i-Nasar, by Muhammad Mahmud Razvi, Makhmur, Akbarabadi, published by Ram Prasad and Brothers, Agra, price annas 12.

Pages 1—116 Class VII.

Pages 117—234 Class VIII.

or

Majmua-i-Nazam, published by Devi Dayal Printing Works, Delhi, price Re. 1-8.

The following selections :—

Wali Ghazal 14 and 15 ...	...	...	} Class VII.
Mir Ghazal 1, 9, 13, 16, 21 and 28 ...	...	...	
Atish Ghazal 1, 2, 3 and 20 ...	...	...	
Momin Ghazal 17, 19 and 20 ...	...	...	
Ghalib Ghazal 1, 6, 8, 10, 14, 18 and 26 ...	...	...	
Dagh Ghazal 2, 4, 8 and 15 ...	...	...	
Amir Ghazal 3, 7, 12 and 14 ...	...	...	} Class VII.
Qasaid-i-Sauda 7 and 8 ...	...	...	
Marsia-i-Anis 2 ...	...	...	

or

Ab-i-Hayat, by Muhammad Husain, "Azad" published by Azad Book Dépôt, Lahore, price Rs. 3.

The following selections :—

Mashafi, pages 307—325 ...	...	...	} Class VIII.
Atish, pages 387—398 ...	...	...	
Zauq, pages 435—495 ...	...	...	
Ghalib, pages 500—531 ...	...	...	
Anis and Dabir, pages 532—551 ...	...	...	} Class VIII.
Tarikh-i-Nazam-i-Urdu, pages 62—78 (old edition)	...	...	
Mirza Muhammad Rafi Sauda, pages 136—166 ...	...	...	
Khwaja Mir Dard, pages 170—179 ...	...	...	
Chautha Daur Tamhid, pages 214—218 ...	...	...	
Saiyid Insha-Ullah-Khan, pages 239—256 ...	...	...	

*Hindi :—*

Hindi, by Badri Nath Bhatt, published by the Ganga Pustak-mala Karyalaya, Lucknow, price annas 10.

Pages 1—45                      ...                      ...                      ... Class VII.

Pages 46—96                    ...                    ...                    ... Class VIII

*or*

Bhishm Pitamah, by Chaturvedi Dwarka Prasad Sharma, published by Nagri Pacharini Sabha, Kashi, price Re. 1-4 (Class VII).

*or*

Mudra Rakshas, by Bhartendu Harish Chandra, published by Seva Sadan, Kashi, price Re. 1 (Class VIII),

*or*

Jaidarth Badh, by Maithili Sharan Gupta, published by Sahitya Sadan, Jhansi, price annas 8.

## APPENDIX VIII.

## General Lines of Study for Teachers.

*Theory.*

1. A student must study the Rag with special attention to Jati, Barjswar, Aroh and Awaroh.
2. Students are expected to have all information about 'Tal' Matra and Bibhag (bars).

*Practical.*

3. Students should be able to sing a song in Bilampit, Madya and Drut laya, and should also be able to sing Alap of the Rag learnt.
4. Students must be able to sing groups of Swar with proper attention to timing, written on blackboard.
5. Students are expected to demonstrate practically Tal learnt in the standard.

Each of the Classes I, II, III and IV should be given instruction in music for at least an average time of three hours per week.

Classes V, VI and VII should be given 3 hours' time for instruction in Vocal Music and the same period for instrumental music per week.

Books recommended are the following :—

- (1) Balodaya Sangit, Parts 1 and 2.
- (2) Sangit Bal Prakash, Parts 1, 2 and 3.
- (3) Sangit Bal Bodh, Parts 1, 2, 3 and 4.
- (4) Sangit Tatva Darshak.
- (5) Ankit Alankar.
- (6) Mahila Sangit, Parts 1 and 2.

Additional books recommended for teachers and students :—

(a) For Classes I to IV :—

- (1) Balodaya Sangit, Parts 1 and 2.
- (2) Mahila Sangit, Parts 1 and 2.
- (3) Bal Prakash, Parts 1 and 2.
- (4) Bhartiya Sangit Lekhan Padhati.
- (5) Ankit Alankar.

(b) For Classes V to VIII :—

- (1) Sangit Balprakash, Part III.
- (2) Sangit Balbodh, Parts 1, 2, 3, and 4.
- (3) Sangit Tatvadarshak.

To be had of Gandharva Mahavidyalaya Panchwati Nasik.

A. H. MACKENZIE, M.A., C.I.E.,  
Director of Public Instruction,  
United Provinces.

ALLAHABAD :

February 29, 1932.

## Curriculum for Vernacular Middle Schools for boys (classes V, VI and VIII) beginning from July, 1932.

### NOTE A.

(1) Boys of class VI should follow in 1932-33 the course laid down in the curriculum for Vernacular Schools for boys for 1931-32.

(2) Boys of class VII should follow in 1932-33 the course laid down in the curriculum for Vernacular Schools for boys for 1930-31.

### NOTE B.

Two curricula are prescribed. Curriculum I is for those Vernacular Middle Schools in which facilities exist or can be provided to the satisfaction of the divisional inspector of schools for the teaching of either Agriculture or Manual Training or Rural Knowledge or Drawing. Curriculum II is for those Vernacular Middle Schools in which such facilities do not exist and cannot be provided.

The general outline of the curricula is as follows :—

#### Curriculum I.

1. Language.
2. Either English or the Second Form of the Vernacular.
3. Arithmetic and either Geometry or Elementary Business Methods.
4. (a) History and (b) Geography.
5. Either Agriculture or Manual Training or Rural Knowledge or Drawing.
6. Physical Training.

#### Curriculum II.

1. Language.
2. Either English or the Second Form of the Vernacular.
3. Arithmetic and either Geometry or Elementary Business Methods.
4. (a) History and (b) Geography.
5. Object Lessons (class V only).
6. Physical Training.

NOTE.—In Kumaun schools which have no facilities for teaching either English or the Second Form of Vernacular, but which have facilities for either Agriculture or Manual Training or Rural Knowledge should follow curriculum I, but should teach Drawing in place of English or the Second Form of the Vernacular; schools in Kumaun which have no facilities for either English or the Second Form of Vernacular or Agriculture or Manual Training or Rural Knowledge should follow curriculum II, but should teach Drawing in place of English or the Second Form of Vernacular.

## NOTE C.

**Agriculture or Manual Training or Elementary Science.**

1. A Vernacular Middle School will be allowed to send up boys for the Vernacular Final Examination in Agriculture or Manual Training or Rural Knowledge only if it has been specially recognized in the subject by the Director of Public Instruction. In those schools which have single sections only in classes V, VI and VII all the boys will be required in the third and subsequent years in which the school is recognized in Agriculture or Manual Training or Rural Knowledge to offer Agriculture or Manual Training or Rural Knowledge in the Vernacular Final Examination. Where such schools have more than one section in classes V, VI and VII, all the boys of one section of each class will learn the subject, and will be required to appear in the Vernacular Final Examination in that subject.

2. Vernacular Middle School with single sections in classes V, VI and VII recognized on or after July 1, 1928 in Agriculture or Manual Training or Rural Knowledge will cease to teach any subject alternative to Agriculture or Manual Training or Rural Knowledge, as the case may be, in class V in the first year, in class VI in the second year and in class VII in the third year of recognition in Agriculture or Manual Training or Rural Knowledge.

## NOTE D.

**Elementary Business Methods.**

The subject Elementary Business Methods is alternative with Geometry. A school will be allowed to send up boys for the Vernacular Final Examination in the subject only if it has been specially recognized in the subject by the Director of Public Instruction. Classes should be opened in the subject only in those places which are commercial centres and where there is sufficient demand.

## CLASS V.

**Curriculum I.**

1. *Language.*—(a) Literary course with grammar.

(b) Translation or paraphrase into modern idiomatic prose from standard authors not read in the class.

(c) Letter-writing in current idiomatic style and in the proper form of courtesy and address.

**Curriculum II.**

1. *Language.*—(a) Literary course with grammar.

(b) Translation or paraphrase into modern idiomatic prose from standard authors not read in the class.

(c) Letter-writing in current idiomatic style and in the proper form of courtesy and address.

2. *English*.—The course prescribed for classes III and IV of Anglo-Vernacular Schools for boys (vide syllabus given in Appendix I).

or

*Second Vernacular*.—Reading (omitting Recitation) and Writing as in class II.

3. *Mathematics*.—(a) *Arithmetic*.—Revision with special attention to mental problems with small numbers. Simple calculations in the four simple rules with decimal fractions (excluding recurring decimals). Conversion of vulgar fractions into decimal fractions to a given number of places and *vice versa*. The four compound rules and reductions into British weights and measures in common use, instruction to be as realistic as possible. Oral and written problems in the above.

(b) *Either*—

(i) *Geometry*.—(1) Measurement and drawing of straight lines.

(2) Addition, subtraction and division of straight lines.

(3) Measurement and drawing of angles.

(4) Addition, subtraction and division of angles.

(5) Properties of adjacent and opposite angles and their construction.

(6) Drawing of parallel straight lines from given conditions.

(7) Names of angles produced by transversals and parallel straight lines and their properties.

Properties of transversals.

2. *English*.—The course prescribed for classes III and IV of Anglo-Vernacular Schools for boys (vide syllabus given in Appendix I).

or

*Second Vernacular*.—Reading (omitting Recitation) and Writing as in class II.

3. *Mathematics*.—(a) *Arithmetic*.—Revision with special attention to mental problems with small numbers. Simple calculations in the four simple rules with decimal fractions (excluding recurring decimals). Conversion of vulgar fractions into decimal fractions to a given number of places and *vice versa*. The four compound rules and reductions into British weights and measures in common use, instruction to be as realistic as possible. Oral and written problems in the above.

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(3) Measurement and drawing of angles

(4) Addition, subtraction and division of angles.

(5) Properties of adjacent and opposite angles and their construction.

(6) Drawing of parallel straight lines from given conditions.

(7) Names of angles produced by transversals and parallel straight lines and their properties.

Properties of transversals.

(3) Names of values of the angles of a triangle.

(8) Names of values of the angles of a triangle.

(9) Parts of a polygon, kinds, values and relationship of the sides and angles of a polygon.

(10) Construction of triangles from given conditions (simple cases).

(11) Congruence of triangles under given conditions (equality and inequality).

(12) Parts of rectilineal figures and parallelograms, kinds and their properties.

or

(ii) *Elementary Business Methods.*

(NOTE.—The *muria* script should not be taught unless there is a local demand.) The course prescribed is given in appendix II.

4. (a) *History*.—British Period of Indian History. From English and French wars in the Deccan to Warren Hastings, the first Governor General.

and

(b) *Geography*.—The course prescribed is given in Appendix III.

5. *Either Agriculture or Manual Training or rural knowledge or Drawing*.—The syllabuses in Agriculture, and Manual Training are given in separate handbooks which will be supplied to schools recognized in these subjects. The syllabuses in rural knowledge and Drawing are given in Appendix IV.

\*6. *Hygiene and Temperance*.—As prescribed in Appendix VI.

7. *Physical Exercises*.—As prescribed in Appendix VII.

or

(ii) *Elementary Business Methods.*

(NOTE.—The *muria* script should not be taught unless there is a local demand.) The course prescribed is given in appendix II.

4. (a) *History*.—Stories from Indian History.

and

(b) *Geography*.—The course prescribed is given in Appendix III.

5. *Object Lessons*.—As prescribed in Appendix V.

6. *Hygiene and Temperance*.—As prescribed in Appendix VI.

7. *Physical Exercises*.—As prescribed in Appendix VII.

\*NOTE.—The course in Hygiene and Temperance is included in the Rural Knowledge course for boys taking the subject.

## CLASS VI.

## Curriculum I.

1. *Language*.—(a) Literary course with grammar.

(b) Translation or paraphrase into modern idiomatic prose from standard authors not read in the class.

(c) Letter-writing in current idiomatic style and in the proper form of courtesy and address.

2. *English*.—The course prescribed for class V of Anglo-Vernacular Schools for boys (vide syllabus given in Appendix I).

or

*Second Vernacular*.—Reading (omitting Recitation and Script-reading), *Grammar and Writing* as in class III.

3. *Mathematics*.—(a) *Arithmetic*.—Revision, measurement of the area of a rectangle and the volume of a rectangular solid when the lengths of the sides are given in feet or inches to one place of decimals; square root; simple and compound proportion; oral and written problems in the above.

(b) *Either*—

(i) *Geometry*.—Parts of a polygon, kinds, values and relationship of the sides and angles of a polygon.

Construction of triangles from given conditions (simple cases).

Congruence of triangles under given conditions (equality and inequality).

Parts of rectilinear figures and parallelograms, their kinds and properties.

If a straight line stands on another straight line, the sum of the

## Curriculum II.

1. *Language*.—(a) Literary course with grammar.

(b) Translation or paraphrase into modern idiomatic prose from standard authors not read in the class.

(c) Letter-writing in current idiomatic style and in the proper form of courtesy and address.

2. *English*.—The course prescribed for class V of Anglo-Vernacular Schools for boys (vide syllabus given in Appendix I).

or

*Second Vernacular*.—Reading (omitting Recitation and Script-reading), *Grammar and Writing* as in class III.

3. *Mathematics*.—(a) *Arithmetic*.—Revision, measurement of the area of a rectangle and the volume of a rectangular solid when the lengths of the sides are given in feet or inches to one place of decimals; square root; simple and compound proportion; oral and written problems in the above.

(b) *Either*—

(i) *Geometry*.—If a straight line stands on another straight line, the sum of the two angles so formed is equal to two right-angles; and the converse

If two lines intersect, the vertically opposite angles are equal.

*Parallel straight lines.*

When a straight line cuts two other straight lines, if—

(i) a pair of alternate angles are equal, or

two angles so formed is equal to two right-angles; and the converse.

If two lines intersect, the vertically opposite angles are equal.

#### *Parallel straight lines.*

When a straight line cuts two other straight lines, if—

- (i) a pair of alternate angles are equal, or
- (ii) a pair of corresponding angles are equal, or
- (iii) a pair of interior angles on the same side of the cutting line are together equal to two right angles, then the two straight lines are parallel; and the converse.

Straight lines which are parallel to the same straight line are parallel to one another.

#### *Triangles and rectilineal figures.*

The sum of the angles of a triangle is equal to two right-angles.

If the sides of a convex polygon are produced in order, the sum of the angles so formed is equal to four right-angles.

If two triangles have two sides of the one equal to two sides of the other, each to each, and also the angles contained by these sides equal, the triangles are congruent.

If two triangles have two angles of the one equal to two angles of the other, each to each, and also one side of the one equal to the

(ii) a pair of corresponding angles are equal, or

(iii) a pair of interior angles on the same side of the cutting line are together equal to two right-angles, then the two straight lines are parallel; and the converse.

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If two triangles have two angles of the one equal to two angles of the other, each to each, and also one side of the one equal to the corresponding side of the other, the triangles are congruent.

If two sides of a triangle are equal, the angles opposite to these sides are equal; and the converse.

If two triangles have the three sides of the one equal to the three sides of the other, each to each, the triangles are congruent.

If two right-angled triangles have their hypotenuses equal and one side of the one equal to one

corresponding side of the other, the triangles are congruent.

If two sides of a triangle are equal, the angles opposite to these sides are equal; and the converse.

If two triangles have the three sides of the one equal to the three sides of the other, each to each, the triangles are congruent.

If two right-angled triangles have their hypotenuses equal and one side of the one equal to one side of the other, the triangles are congruent.

If two sides of a triangle are unequal the greater side has the greater angle opposite to it; and the converse.

side of the other, the triangles are congruent.

If two sides of a triangle are unequal the greater side has the greater angle opposite to it; and the converse.

Any two sides of a triangle are greater than the third.

If two triangles have two sides of the one equal to two sides of the other, each to each, but the angles contained by these sides unequal, the base subtending the greater angle will be greater than the other; and its converse.

Of all the straight lines that can be drawn to a given straight line from a given point outside it, the perpendicular is the shortest.

or

or

(ii) *Elementary Business Methods.* (ii) *Elementary Business Methods.*

(NOTE.—The *muria* script should not be taught unless there is a local demand.) The course prescribed is given in appendix II.

4. (a) *History.*—British Period of Indian History. From Lord Cornwallis, the second Governor General to Lord Elgin, the second Viceroy."

(NOTE.—The *muria* script should not be taught unless there is a local demand.) The course prescribed is given in appendix II.

4. (a) *History.*—Indian History in outline to the decline of the Moghul Empire with reference to the following:—

*Introductory.*—The country and its people.

(1) *The Hindu period.*—The Aryans; how we learn about the past; Buddha and his story; Alexander the Great in India; Chandra Gupta and his court; Asoka; Kanishka; the Gupta Empire; Fa-hien; Harsha-Hioen Tsang; the Rajputs.

(2) *The Muhammadan period.*—Mahmud of Ghazni; Muhammad

Ghori; Sultana Razia and Balban; Alauddin; Muhammad Tuglak; Firoz; Timur; Babar; Humayun and Sher Shah, Akbar; Jahangir and Shahjahan; Aurangzeb; Sivaji; decline of the Moghul Empire; the Mahrattas.

and

(b) *Geography*.—The course prescribed is given in Appendix III.

5. *Either Agriculture or Manual Training or Rural Knowledge or Drawing*.—The syllabuses in Agriculture and Manual Training are given in separate hand-books which will be supplied to schools recognized in these subjects. The syllabuses in Rural Knowledge and Drawing are given in Appendix IV.

\*6. *Hygiene and Temperance*.—As prescribed in Appendix VI.

7. *Physical Exercises*.—As prescribed in Appendix VII.

and

(b) *Geography*.—The course prescribed is given in Appendix III.

5. *Hygiene and Temperance*.—As prescribed in Appendix VI.

6. *Physical Exercises*.—As prescribed in Appendix VII.

#### CLASS VII.

1. *Language*.—(a) Literary course with grammar.

(b) Translation or paraphrase into modern idiomatic prose from standard authors not read in the class.

(c) Letter-writing in current idiomatic style and in the proper form of courtesy and address.

2. *English*.—The course prescribed for class VI of Anglo-Ver-

1. *Language*.—(a) Literary course with grammar.

(b) Translation or paraphrase into modern idiomatic prose from standard authors not read in the class.

(c) Letter-writing in current idiomatic style and in the proper form of courtesy and address.

2. *English*.—The course prescribed for class VI of Anglo-Ver-

\*NOTE.—The course in Hygiene and Temperance is included in the Rural Knowledge course for boys taking the subject.

vernacular Schools for boys (vide syllabus given in Appendix I)

or

*Second Vernacular.—Reading* (omitting Recitation and Script-reading), *Grammar and Writing* as in class IV.

3. *Mathematics.*—(a) *Arithmetic.*—Revision, proportional parts. More difficult examples in simple and compound proportion. Profit and loss. Oral and written problems in the above.

NOTE.—Pupils should be taught how to solve a simple equation with one unknown quantity and should be encouraged to use symbols in the solution of questions in Arithmetic.

(b) *Either—*

(i) *Geometry.*

(A) *Practical (Problems).*

1. Bisection of angles and of straight lines.

2. Construction of perpendiculars to straight lines.

3. Construction of an angle equal to a given angle.

4. Construction of parallels to a given straight line.

5. Simple cases of the construction from sufficient data of triangles and quadrilaterals.

6. Division of straight lines into a given number of equal parts.

7. Construction of a triangle and a rectangle equal in area to a given polygon.

(B) *Theorems.*

Any two sides of a triangle are greater than the third.

If two triangles have two sides of the one equal to two sides of

vernacular Schools for boys (vide syllabus given in Appendix I)

o

*Second Vernacular.—Reading* (omitting Recitation and Script-reading), *Grammar and Writing* as in class IV.

3. *Mathematics.*—(a) *Arithmetic.*—Revision, proportional parts. More difficult examples in percentage and in simple and compound proportion. Profit and loss. Oral and written problems in the above.

NOTE.—Pupils should be taught how to solve a simple equation with one unknown quantity and should be encouraged to use symbols in the solution of questions in Arithmetic.

(b) *Either—*

(i) *Geometry.*

(A) *Practical (Problems).*

1. Bisection of angles and of straight lines.

2. Construction of perpendiculars to straight lines.

3. Construction of an angle equal to a given angle.

4. Construction of parallels to a given straight line.

5. Simple cases of the construction from sufficient data of triangles and quadrilaterals.

6. Division of straight lines into a given number of equal parts.

7. Construction of a triangle and a rectangle equal in area to a given polygon.

(B) *Theorems.*

Parallelograms and trapeziums.

The opposite sides and angles of a parallelogram are equal,

the other, each to each, but the angles contained by these sides unequal, the base subtending the greater angle will be greater than the other; and its converse.

Of all the straight lines that can be drawn to a given straight line from a given point outside it the perpendicular is the shortest.

Parallelograms and trapeziums.

The opposite sides and angles of a parallelogram are equal, each diagonal bisects the parallelogram and the diagonals bisect one another.

each diagonal bisects the parallelogram and the diagonals bisect one another.

If there are three or more parallel straight lines and the intercepts made by them on any straight line that cuts them are equal, then the corresponding intercepts on any other straight line that cuts them are also equal.

## 2. Loci.

The locus of a point which is equidistant from two fixed points is the perpendicular bisector of the straight line joining the two fixed points.

The locus of a point which is equidistant from two intersecting straight lines consists of the pair of straight lines which bisect the angles between the two given lines.

## (c) *Experimental.*

### Co-ordinates and areas.

Plotting of points and drawing of straight lines and rectilinear figures.

Areas of the following rectilinear figures by counting the squares.

Square, rectangle, right-angled triangle, parallelograms, triangles, complements about a diagonal of a parallel, quadrilaterals and polygons.

Verification of the theorems that—

- (i) the area of a parallelogram is equal to the area of the rectangle on the same

## (c) *Experimental.*

### Co-ordinates and areas.

Plotting of points and drawing of straight lines and rectilinear figures.

Areas of the following rectilinear figures by counting the squares.

Square, rectangle, right-angled triangle, parallelograms, triangles, complements about a diagonal and quadrilaterals and polygons.

Verification of Pythagoras, theorem.

## (d) *Theorems.*

*Area.*—Area of a rectangle.

base and between the same parallels;

- (ii) the area of a triangle is equal to one-half of the area of the rectangle on the same base and between the same parallels.

Proofs of these need not be taught.

The area of a parallelogram is equal to the area of the rectangle on the same base and between the same parallels.

The area of a triangle is equal to one-half of the area of the rectangle on the same base and between the same parallels.

Equal triangles on the same base are of the same altitude.

If parallelogram and a triangle stand on the same base and between the same parallels, the area of the parallelogram is double that of the triangle.

Complements about a diagonal are equal.

Pythagoras theorem and its converse.

- (d) *Practical determination of areas of irregular rectilineal figures.*

*Field Book.*

NOTE (1).—The boys should actually determine the areas of fields in the neighbourhood of schools by means of measuring chains, sticks and right angles, according to the practice of the district. (The boards should supply each middle school with the necessary measuring instruments.)

NOTE (2).—The syllabus given above follows the order of treatment in the prescribed text-books, but the teacher may teach the subject in such a way that the connected theorems, problems and experimental work may be treated together.

- (e) *Practical determination of areas of irregular rectilineal figures.*

*Field Book.*

NOTE (1).—The boys should actually determine the areas of fields in the neighbourhood of schools by means of measuring chains, sticks and right angles, according to the practice of the district. (The boards should supply each middle school with the necessary measuring instruments.)

NOTE (2).—The syllabus given above follows the order of treatment in the prescribed text-books, but the teacher may teach the subject in such a way that the connected theorems, problems and experimental work may be treated together, e.g., the verification of Pythagoras theorem may be taken up in connection with "Pythagoras theorem and its converse" given under theorems on area.

or

- (ii) *Elementary Business Methods.*

(NOTE.—The *muria* script should not be taught unless there is a local demand.) The course prescribed is given in Appendix II.

or

- (ii) *Elementary Business Methods.*

(NOTE.—The *muria* script should not be taught unless there is a local demand.) The course prescribed is given in Appendix II.

4. (a) *History*.—British Period of Indian History. From Lord Lawrence, the third Viceroy, to Lord Reading, the fifteenth Viceroy. The students will be expected also to have made a brief study of the existing system of Indian administration including the following:—

Defence, Police, Courts of Justice, Local Self-Government, municipalities, Education, Famine Relief, Public Health, Co-operative Banks, Trade and Commerce, Relations with Indian States.

(b) *Geography*.—The course prescribed is given in Appendix III.

5. *Either Agriculture or Manual Training or Rural Knowledge or Drawing*.—The syllabuses in Agriculture, and Manual Training are given in separate handbooks which will be supplied to schools recognized in these subjects. The syllabuses in Rural Knowledge and Drawing are given in Appendix IV.

\*6. *Hygiene and Temperance*.—As prescribed in Appendix VI.

7. *Physical Exercises*.—As prescribed in Appendix VII.

4. (a) *History*.—Indian History in outline from the decline of the Moghul Empire with reference to the following:—

(1) The coming of the European traders. (2) Dupleix and Clive. (3) Rise of the East India Company to the supremacy in India. Warren Hastings. Cornwallis. Wellesley. (4) The Company as the paramount power in India. Lord Hastings and his three wars—the Burmese wars—Lord William Bentinck and his reforms. The Afghan and Sikh wars. Dalhousie's administration—the Mutiny—Queen Victoria's Proclamation. Development since 1858.

(b) *Geography*.—The course prescribed is given in Appendix III.

5. \**Hygiene and Temperance*.—As prescribed in Appendix VI.

6. *Physical Exercises*.—As prescribed in Appendix VII.

#### APPENDIX I.

Syllabus of the courses in English for classes III to VI of Anglo-Vernacular Schools for boys.

#### UPPER PRIMARY SECTION.

##### CLASS III.

*Conversation and reading*.—The early stages of instruction will be mainly oral, and should include systematic training in the sounds of spoken English in connection with the pronunciation of easy words. By the end of the year the class should be able to carry on simple conversation about familiar objects and actions.

To read with correct pronunciation an easy primer; to render into the vernacular easy sentences from the primer; to use the words of the primer in simple sentences, and to answer in English simple questions based on the matter in the primer.

\*NOTE.—The course in Hygiene and Temperance is included in the Rural Knowledge course for boys taking the subject.

*Spelling and writing.*—To spell the words of the primer; copy-writing in ruled books of easy familiar words; writing in copy-books (in the latter half of the course); dictation in ruled books of words and sentences previously read in the primer.

#### CLASS IV.

*Conversation and reading.*—To converse about common objects and actions; to read with correct pronunciation from a reader; to render into vernacular easy sentences from the reader; to use the words of the reader in simple sentences, and to answer in English simple questions based on the matter in the reader.

*Spelling and writing.*—To spell the words of the reader; dictation in ruled books of words and sentences previously read in the reader; writing in copy-books.

*Grammar and composition.*—Formal grammar should be commenced; division of a sentence into two parts: subject and predicate. To point out nouns, pronouns, adjectives and verbs (without sub-classification). Oral and written exercises in the above.

Easy written composition (at least once a week), e.g., completion of sentences. Easy written composition from the vernacular into English idiomatic sentences (at least once a week).

Written composition from the vernacular into English idiomatic sentences and continuous prose.

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### LOWER MIDDLE SECTION.

#### CLASS V.

*Conversation, reading and recitation.*—To carry on simple conversation in English; to read with correct pronunciation from a reader; to use the words of the reader in simple sentences; to answer in English questions based on the matter in the reader; to recite simple poems with action.

*Dictation and writing.*—Dictation, in ruled books, of words and sentences previously read in the reader; writing in copy-books; transcription from the reader.

*Grammar and composition.*—Parts of speech without sub-classification; number and gender of nouns and pronouns; the use of the three simple tenses. Oral and written exercises on the above.

*Written composition.*—E.g., using the words and phrases of the reader in simple sentences; description of pictures and objects.

Written composition from the vernacular into English idiomatic sentences and continuous prose.

#### CLASS VI.

*Conversation, reading and recitation.*—To carry on simple conversation in English; to read with correct pronunciation from a reader; to use the words of the reader in simple sentences; to answer in English questions based on the matter in the reader; to recite from memory passages chosen from the reader.

*Dictation and writing.*—Dictation, in ruled books, of passages chosen chiefly from the reader; writing in copy-books or transcription from the reader.

*Grammar and composition.*—Revision of previous work in grammar; nouns in apposition; sub-classification of nouns, pronouns, adjectives and adverbs; cases of nouns and pronouns; direct and indirect objects; verbs, numbers and persons, transitive and intransitive; participles; use of tenses; analysis of simple sentences. Oral and written exercises on the above.

*Written composition.*—E.g., the use of the words and phrases of the reader in simple sentences; reproduction of simple stories; practice in answering easy questions on the subject-matter of the text; description of pictures and objects; punctuation.

Written composition from the vernacular into English idiomatic sentences and continuous prose.

The English text-books, etc., to be used are as follows :—

Class.	Longmans, Green & Co.	Tipping's Direct Method Books.
V ..	The New Method Reader, Book IA and IB, by Michael West (new series). (6 annas each.)	{ First Direct Method English Reader. (5 annas.)
VI ..	The New Method Reader, Book II, by Michael West (new series).	{ Second Direct Method English Reader. (8 annas.)
		{ Third Direct Method English Reader. (10 annas.)
VII ..	The New Method Reader, Book III, by Michael West (new series).	{ Fourth Direct Method English Reader. (14 annas.)

The English copy-books to be used are :—

Class.	Series.				
	Longmans, Green & Co.		Gulab Singh and Sons.	Blackie & Sons (Vere Foster's).	Reversible copy-books (Blackie & Sons).
	Upright.	Semi-upright.			
V ..	1, 2, 3	2, 3, 4	1, 2, 3, 4	1, 2	1, 2
VI ..	4, 5	6	6	3, 4	3, 4
VII ..	6, 7, 8	7	7, 9, 10	5, 6	5, 6
	(Rs. 1-8 per dozen.)	(Rs. 1-8 per dozen.)	(1 anna 6 pies each.)	1 anna 6 pies each.)	(4d. each.)

The books approved for translation exercises are :—

(1) Translation Practice in two parts for Lower Middle section, by B. D. Gordon; (2) Exercises in Translation from Urdu into English by J. R. Cornah, published by Gulab Singh & Sons, Lahore. (6 annas.)

The following books on English Grammar and composition are recommended for use :—

- (1) Primer of English Grammar, published by the Christian Literature Society for India, Madras. (8 annas.)
- (2) The Middle School English Grammar, Part I (Standard V), by L. Tipping. Macmillan & Co. (6 annas.)
- (3) Lessons in English Composition, Book I, by J. C. Nesfield. Macmillan & Co. (7d.)
- (4) Picture Composition Pupils' Book, by J. N. Fraser. (K. and J. Cooper, Bombay.) (10 annas.)

## APPENDIX II.

### *Elementary business methods.*

(NOTE.—The *muria* script should not be taught unless there is a local demand.)

#### CLASS V.

I.—(i) Practical tables  $\frac{1}{4}$  to  $5\frac{1}{2}$  up to 40 times.

(ii) Gur—

- (a) connecting weights and values, and
- (b) connecting length and values, and

(iii) Anks. Calculation of interest by anks.

II.—Revision of reading and writing of bahis and khatas (method of keeping two bahis) (in vernacular).

**A. Preparation of bahis—**

- (i) Terms of Sira Peta, Jama, Nan and Shri rokar baqi.
- (ii) Writing of heading Badi, Sudi, Fasli and Bikrami sambat.
- (iii) Posting of cash account in cash book or roznamcha or rokar.
- (iv) Ditto goods accounts in ditto.
- (v) Ditto interests and debts ditto.
- (vi) Ditto credit sales and purchases ditto.
- (vii) Ditto partly cash and partly credit sales and purchases in cash book or roznamcha or rokar.
- (viii) Balancing.
- (ix) Detection of mistakes and adjustments of accounts.

**B. Preparation of khatas—**

- (i) To post personal khatas from the bahis.
- (ii) To post real or property khatas.
- (iii) To post nominal, fictitious and proprietary khatas

**III.—Elementary General Information—**

- (i) Definitions of (a) Trader, banker, hawker, merchant, bijak hundi, etc.  
(b) Arhatia, dalal, dandidar and goledar, etc.
- (ii) Post office transactions relating to parcels, registration, V.-P. P. and money orders.
- (iii) Railway department, telegraphic money orders, railway receipts, freight of goods, municipal rates and taxes.
- (iv) Forms and stamps for receipts; drawing up of contracts on stamped paper.

**CLASS VI.****I.—(i) Reading of bahis and khatas in vernacular.**

- (ii) Ditto letters, bijaks and hundies in vernacular.

**II.—(i) Money and other measures—**

- (a) conversion of Indian and British money;
- (b) conversion of British weights and measures into Indian weights and measures.
- (ii) Gurs—
  - (i) used for the sale of and purchase of articles in dozens, scores and grosses,
  - (ii) used in the sale and purchase of grain, cloth, gold and grocery.

### III.—Reading and writing of bahis and khata in the vernacular—

- (i) To post accounts in waste book and cash book, i.e., kachcha and pucca roznamcha or rokar or khasra for a continued period of seven days or one week.
- (ii) To prepare ledger of personal accounts, real or property accounts, and nominal or fictitious accounts from cash book or roznamcha for seven days.

NOTE.—After revising the posting of entries learnt in class V the students may be required to post the following entries in their accounts :—

- (a) Advancing of money on ornaments and other valuable property; (b) expenses incurred in paying commissions, "arbat", "toloi", etc. (c) transaction through agents and dalal; (d) receiving and sending out of goods by V.-P. P. and F. O. R.; (e) exchanging goods (inwards and outwards returns).
- (iii) Reading of Jakar bahi.
- (iv) Reading of purchase book and sales book and journal (jama-bahi) (nam-bahi and nagal).
- (v) Preparing of balance-sheet (chittha).

### IV.—General information—Very elementary knowledge of—

- (i) Hundi transactions.
- (ii) Banking—
  - (a) Current account, (b) opening of fixed deposit account, (c) encashment of cheques.
- (iii) Elementary information on income-tax, promissory notes and insurance companies.
- (iv) Rahan-nama, bai nama, registration of deeds.

### CLASS VII.

#### I.—(i) Posting of bahi khata in the vernacular.

- (ii) Writing of letters, baijak and hundies in the vernacular.

#### II.—(i) Calculation of compound interest, present worth and discount by mahajani methods.

- (ii) Calculations relating to stocks and shares and the distribution of dividends.

- (iii) Calculation and fixing of sale prices of articles.

### III.—Reading and writing of bahis and khata (in vernacular)—

- (i) Entry of transactions with banks in roznamcha, kachchi and pacci rokar or khasra.
- (ii) Internal and external goods accounts, "ankara" or tallying, closing of khata, i.e., "baqi torna" and posting of debts repayable by instalments.
- (iii) "Fehrist bahi" or stock book, "ikahri nagal" and "dohri nagal," jama and nam "bahi," "jakar" jantri or journal, etc.

Posting of the above from roznamcha and khata, i.e., cash book and ledgers.

(iv) (a) Reading and writing of patwari's papers (khasra, khatani, khewat and siyaha).

(b) Reading and writing of zamindar's accounts (khata, khatani, siyaha and receipt book).

(v) Ledgers of shareholders.

IV.—General information. (NOTE.—General ideas in broad outline alone should be taught.)

(i) General information regarding office routine, banking, foreign trade, bills of exchange, agencies and co-operative societies.

(ii) Stamp duties and income-tax.

### APPENDIX III.

#### Geography.

##### CLASS V.

Revision of previous work, specially of plan and map-making. The use of the globe in explanation of the phenomena of day and night and of the seasons. Reading of the bathy-orographical map of India; colouring scale, direction measurement of distances, flow of rivers, the coast line and the sea; the natural divisions of India; the northern mountains; the Indo-Gangetic Plain, the Deccan, Burmah, Ceylon; the climate of India; its peoples, their occupations; communications.

Special attention should be paid to the soils and agricultural products of India.

##### CLASS VI.

Revision of previous work for the sake of contrast and comparison when dealing with new areas. Reading of the bathy-orographical map of Asia; simple ideas on latitude and longitude; climate of Asia; the Tundras; the Great Northern Forests; grass-lands and Steppes; the mid-Asiatic table-lands; the eastern border land and islands; the south-western deserts; the western table-lands and coast lands; trade routes; the atmosphere, causes of rain and drought; earthquakes and volcanoes (when studying Japan and the Eastern Archipelago); human activities.

##### CLASS VII.

Europe, North America, Africa, South America and Australia, treated in broad outline in the same regional fashion as in class VI.

NOTE.—In the study of geography special attention should be given to comparing and contrasting the geography, climate, people, occupations, communications, soils and products of India with those of other countries.

## APPENDIX IV.

Rural knowledge and drawing.

## COURSE IN RURAL KNOWLEDGE.

## OUTLINE SYLLABUS.

## Class V.

<i>Agriculture</i>	...	...	The plant and how it grows. Air in connection with plant life. The atmosphere.
<i>Animal Life</i>	...	...	Insects harmful and useful to man. The frog.
<i>Hygiene</i>	...	...	The human body and how it works; cleanliness.
<i>Heat and Light</i>	...	...	The thermometer; the magnifying glass; spectacles.
<i>The Village</i>	...	...	The panchayat.
<i>The Postman</i>	...	...	His work. How a letter is carried.
<i>The Policeman</i>	...	...	His work. How to help the police.
<i>The Railway</i>	...	...	Travelling by rail.

## Class VI.

<i>Agriculture</i>	...	...	The soil, soil treatment, tillage, irrigation. Work of the Agriculture and Irrigation Departments in relation to village life.
<i>Co-operative Societies</i>	...	...	Their relation to agriculture.
<i>Hygiene</i>	...	...	Disease, sanitation, food and water. Work of the Public Health Department.
<i>The District Board</i>	...	...	The Board's work. The education committee.

## Class VII.

<i>Agriculture</i>	...	...	Propagation of fruit trees. Care of animals. Cattle-breeding. Work of the Veterinary and Forest Departments. Famines.
<i>Hygiene</i>	...	...	First aid.
<i>How the country is governed...</i>			The executive, judiciary and legislature. Landlord and tenant. Tenancy law.
<i>How Government obtains and spends money.</i>			
<i>Education.</i>			

## COURSE IN RURAL KNOWLEDGE.

### DETAILED SYLLABUS.

*For Classes V to VII of Middle Vernacular Schools.*

#### CLASS V.

##### AGRICULTURE.

##### The Plant and how it grows.

*Introduction.*—The wonder, beauty and mystery of nature. Why plant life should be studied first. Parts of a plant.

*Germination.*—The growth of bean and wheat seeds to be observed and compared. The manner in which the seedlings push their way through the soil to be noted and the different ways in which the roots grow. Conditions of germination. The depth at which seeds should be sown. Sowing seeds by a drill. To show by experiment that water, warmth and air are necessary for the growth of seeds.

*The Root.*—Tap and fibrous roots. Growth in length of the root. The root cap. Root hairs. To show by experiment how water is sucked into the roots. Absorption of water by roots; to be shown by using red ink.

*The Stem.*—The stem grows upwards and towards the light. Kinds of stems. The potato a swollen stem. To show by experiment how water passes up the stem. The work of the stem; to support leaves, to carry water and food taken up by the roots, to carry to different parts of the plant food made in the leaves by sunlight. Buds, and the places where they are found on branches.

*The Leaf.*—The veins, how arranged. Work of the leaves. Leaves give out water; to be shown by experiment. Air cooled by evaporation of water from leaves. Plants wither if roots, owing to injury, are unable to take in water. Care of roots when transplanting. How the leaf makes food. The leaf a food factory for the plant. The work of sunlight on the green stuff in leaves. Weeds cut off sunlight from young plants. Breathing of plants. To show by experiment that seeds and plants breathe.

*The Flower and Seed.*—The work of a plant; to ripen seeds. Parts of a flower. Fertilization. How pollen is carried by wind and insects. Development of the seeds. How seeds are scattered by wind, animals and water. Length of plant life.

##### The Atmosphere.

Empty vessels contain air. Hot air rises. Fire balloons rise with hot air. Air a mixture of gases. Experiment to show that only a

portion of the air is used up when anything is burnt in it. The gas used up is oxygen; the gas left is nitrogen. Carbon dioxide gas is obtained when charcoal is burnt. Carbon dioxide gas in relation to human and plant life. Plants purify air left impure by animals. Water vapour in the air; its amount usually less in the dry than in the rainy season. Test for carbon dioxide, using chalk. Black-board chalk the same as white limestone. The breath contains carbon dioxide. Lime water turns milky when breath is blown into it.

### Animal Life.

*Insect Life.*—General description of an insect. Insects harmful and useful to man. The butterfly, its life history; the egg, caterpillar and pupa stages. Eggs to be collected and the development of the various stages watched. The mosquito, its life history. The mosquito the carrier of the malaria germ. Breeding places. The housefly, its breeding habits and life history; a carrier of disease. The flea, its habits and its relation to plague. The bug and the louse.

*The Frog.*—Its life history, the egg and tadpole stages. Difference between a frog and a toad. Both friends of the farmer. Eggs or tadpoles to be collected and kept with water-plants in a large glass vessel. The development of the various stages to be watched.

### Hygiene.

*How to keep well.*—How a knowledge of the working of the different parts of the body will help.

*The Skeleton.*—Made up of a large number of bones. Strength of the bones. How to help the bones to grow straight and strong. How bones are joined together. What makes them move. The skull; protection for the brain. The backbone; made up of a number of bones. The position of the spinal cord. The spinal cord carries messages to and from the brain and to all parts of the body. The ribs the body's armour. The effect of food on the growth of bones. Value of games and exercises.

*What happens to the food we eat.*—Food should be chewed and mixed with saliva. Spitting a waste of saliva. The food pipe leads into the stomach. The use of the tongue while chewing. Food mixes with juices in the stomach, afterwards passing into the bowels where it is then absorbed. Waste matter should be got rid of daily.

*The Heart and its work.*—Position of the heart. The heart a pump with walls made of muscles. Arteries and veins. Circulation of the blood. Arteries carry pure blood and veins impure blood. Heart beats. The blood. Red and white cells and the work they do. Bad air and alcohol hinder the work of the blood cells. Temperature of the body in illness and in health.

*The Lungs and their work.*—Air necessary for life. The windpipe. Position of the lungs. How the lungs draw in air. Fresh air necessary for a healthy life. Why we should breathe through the nose. The voice-box.

*The Skin.*—Work of the pores. Why the skin should be kept clean.

*The Teeth.*—Use of the teeth. Why they should be kept clean.

#### Heat and Light.

*The Thermometer.*—Expansion of water. A large narrow-necked bottle full of water is placed in the sun; the water when hot overflows. Expansion of a liquid to show when a body is hot or cold. The thermometer. Temperature of the body rises during fever.

*The Magnifying Glass.*—Light travels in straight lines. Reflection in a mirror. When light rays travel through a lens they are bent. The burning glass. The magnifying glass makes things look larger than they really are. Spectacles. How to tell if you have bad sight.

#### The Village.

The panchayat. The work of the lambardar, patwari and watchman. The headman.

#### The Postman.

The work of the postman. How a letter is carried. Registered letters. Postage rates. How to send money through the post office. Post office savings banks. Cash Certificates. The Telegraph. How to send a telegram.

#### The Police.

The work of the police. How to help the police. Additional police.

#### The Railway.

Travelling in India before railways were developed. Advantages of railways to India. Railways provide work for many people. What makes the engine move. The use of signals; red and green lights. Travelling by train. Sending a parcel by train. Cost of sending a parcel by passenger and goods trains.

### CLASS VI.

#### AGRICULTURE.

*Introduction.*—Agriculture the main occupation of India; Proportion of population engaged in agriculture. Kinds of farming; cattle grazing and where it is best practised; sheep farming; goat farming. General agriculture. Reasons why the soil in India is poor compared

with that of other civilised countries. Comparison of the yield of land in India with the yield of land in other countries. Rainfall and climate; how they determine the kinds of farming.

*The Soil.*—How formed. The sub-soil. Heavy, light and medium soils. The value of lime and humus. Excess and deficiency of moisture in soil. Soil air, soil temperature and soil organisms.

*Soil Treatment.*—Losses of moisture and plant food from the soil and how loss may be prevented. Weeds. Rotation of crops. Increasing moisture and plant food material by cultivation. Replacing lost food material by addition of manure. Object of manuring. How rubbish, cattle urine and dung may best be preserved as manure. Green manuring. Slow and quick acting manures. How to use manures. When to use a quick acting manure.

*Tillage.*—Necessity for tillage; advantages of deep tillage. Implements commonly used by the cultivator. The soil-turning plough examples. Brief description of the working of one type of each of the following improved implements :—

a harrow, cultivator and a plough.

Advantages of using improved implements of tillage.

*How Government helps the farmer.*—The objects and methods of the Agricultural Department. Improved seed of wheat, rice, sugarcane, cotton, gram, fodders, etc., and where they may be obtained. Improved seed compared with seed in common use. Illustrations showing the actual money gain due to the use of improved seed. Improved implement of husbandry used on Government farms; seed-drills, reaping machines, cane-crushing machines, fodder-cutting machines, threshers and tractors, irrigation machinery. The chief crop pests; methods employed by the Agricultural Department to destroy them. General methods employed in farming on Government farms; lessons they teach to the rayat.

*Irrigation.*—The need of irrigation. Sources of water for irrigation. Economy of water. Brief, elementary comparisons of tube-wells, Persian wheels and small water lifts such as the Baldeo balti and the beri or country basket. Dangers of over-irrigation. The canal system of the United Provinces. The work of the Irrigation Department.

#### Co-operative Societies.

Capital required by cultivators. The small agriculturist has little credit, hence the interest he pays on borrowed money is high. The co-operative credit system, and its value to the cultivators. Why such a society can get money cheaply. Advantages of membership. How to become a member. How to obtain a loan. How profits are used. Encouragement of thrift. Central banks. Other kinds of co-operative societies.

**Hygiene.**

*Diseases.*—Infectious diseases caused by germs. How diseases are spread by water and insects. Causes, diagnosis, remedial and preventive measures for cholera, malaria, plague, tuberculosis, small-pox, hook-worm and leprosy.

*Personal and Domestic Hygiene.*—Cleanliness of the skin, fingers, eyes, ears, hair, teeth. Clothing and shoes. Exercise and fresh air. Ventilation and general cleanliness of the house. Storage of food and water in the house. Diet. Value of milk for babies and young children. Danger of eating overripe fruits.

*Sanitation.*—Cleanliness of the village. Pits for latrines. Water-supplies; how to keep well water pure and clean, danger of washing dirty clothes near well. Danger of flies, mosquitoes and unhealthy dogs. Disposal of dead bodies. The work of the Public Health Department.

**The District Board.**

Functions of the board. How members are elected. Work of the chairman. Activities of the board in relation to village life. How the money for the work of the board is obtained. How the funds of the board are spent. The education committee.

(NOTE.—Little plays should be arranged by the teacher in connection with the above subjects on Hygiene, each boy, as far as possible, should take his turn in acting a part.)

**CLASS VII.****AGRICULTURE.**

*Trees.*—Propagation of trees, layering, gootee, budding, grafting, marching, prunning. Watering of trees.

*Cattle.*—Comparison of Indian with European cattle. Care of animals. Improvement of draught and milk cattle. Importance of good milk. Methods employed by the Agricultural Department for the improvement of village cattle. The Hissar and Hansi breeds. The Delhi buffalo.

*Forests.*—The work of the Forest Department.

*Famines.*—How caused. Less to be feared now than formerly. Remedial measures.

**Hygiene.**

How we can help our friends. Simple rules about common infectious diseases. Care of the sick; food for sick persons.

*First Aid.*—Snake-bite, mad dog bite, cuts and wounds, burns, poisoning, bleeding, broken bones, drowning.

**How the country is governed.**

The district as the administrative unit. The district officer, the superintendent of police, the engineer, the forest officer; their work and the work of their subordinates. The province divided into a

number of districts. The Commissioner and his work. The Government. The Governor. The Government of India. The Viceroy. The Legislative Council. Its work. How members are elected. How to vote. The Judiciary. The Zamindari system of the United Provinces Tenancy Law.

#### How Government obtains and spends money.

The land revenue. Work of the settlement officers. How the revenue is collected. Taxes. Why we pay them. Provincial income—excise, stamp, forest, irrigation. Imperial income—salt tax, amount per seer of salt, income-tax opium, customs. How the money is spent by the Provincial Government:—law and order, education, medical work and sanitation, agriculture, veterinary work, irrigation, co-operative societies, communications, grants to local bodies. Expenditure of the Government of India—defence, internal and external. The need of the army and the police.

#### Education.

Its value, its development in the United Provinces; the education of girls.

#### Text Book.

Rural knowledge for vernacular middle schools, Book I, for class V (Urdu or Hindi) published by Rai Sahib Ram Dayal Agarwala, Katra, Allahabad. (3 annas each.)

Rural knowledge for vernacular middle schools, Book II, for class VI (Urdu or Hindi) published by Rai Sahib Ram Dayal Agarwala, Katra, Allahabad. (4 annas each.)

Rural knowledge for vernacular middle schools, Book III, for class VII (Urdu and Hindi) published by Rai Sahib Ram Dayal Agarwala, Katra, Allahabad.

#### Drawing.

##### CLASS V.

Macmillan's Official Drawing Book, no. 5 (6 annas); or Nelson's Graduated Drawing Book no. 5; or Indian Drawing Books for Vernacular Schools, book no. 5, published by the Indian Press, Allahabad (4 annas); or Banbery's Scholar's Drawing Book no. 5, Urdu or Hindi, published by the Indian Press, Allahabad (6 annas).

##### CLASS VI.

Macmillan's Oriental School Drawing Book, Part I (6 annas); or Nelson's Graduated Drawing Book, no. 6 or 7; or Indian Drawing Books for Vernacular Schools, Book no. 6, published by the Indian Press Allahabad (4 annas); or Banbery's Scholar's Drawing Book no. 6, Urdu or Hindi, published by the Indian Press, Allahabad (7 annas).

##### CLASS VII.

Macmillan's Oriental School Drawing Book, Part II (6 annas) and III (5 annas); or Nelson's Graduated Drawing Book no. 9.

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NOTE.—Teachers of drawing in schools where Banbery's Scholar's Drawing books are used are recommended to use "Teachers' Drawing Manual" in Urdu or Hindi by H. Banbery, published by the Indian Press, Allahabad. (Rs 2.)

## APPENDIX V.

## Object Lessons.

Serial no.	Subject.	Detailed syllabus.	Month of the year in which the subject is to be taught.
		CLASS V.	
1	Seeds	Soak beans in water for a few hours and take off the skins. Note the white tip (future root); separate the fleshy parts; note the white stem lying between them.	July.
2	Germination..	To grow and examine seed, e.g., beans, wheat, mustard, peas, onion, etc., and to make sketches showing the stages in growth of the seeds and also to examine the seedlings by pulling up a few at intervals of about two days:—	July and August.
3	Chief things needed for germination.	<p>(a) Supply of moisture.  (b) Air.  (c) A certain degree of warmth.</p> <p><i>Experiments for (a) and (b).</i></p> <p>(1) Fill a bottle with dry seeds, put some elastic bands about it and place it under water; after a few days the bottle will burst by the swelling seeds.</p> <p>(2) Place some dry seeds in dry sawdust and others in moist sawdust (an inch below the surface); compare the results after a week or two.</p> <p>(3) Take three small wide-mouthed bottles, two of which have good corks. Call these I, II and III.</p> <p>Dry I, place in it some seeds (mustard, wheat, barley), cork and seal with sealing wax.</p> <p>In II put two or three layers of blotting paper (wet) at the bottom; then put in seeds and cork and seal as before.</p> <p>Treat III like II, but leave the bottle uncorked. Put the bottles side by side and examine daily.</p> <p>In I they do not germinate, no water and little air.</p> <p>In II they grow for a little while but then die.</p> <p>In III they grow well if the paper is kept moist.</p>	August and September.

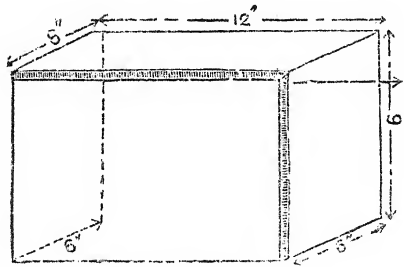
Serial no.	Subject.	Detailed syllabus.	Month of the year in which the subject is to be taught.
		<p><i>Experiment for (c).</i></p> <p>Take two small flower pots and fill them with moist sawdust or sand. Sow some barley or wheat seed in each. Place one pot in another earthen vessel in which water is kept for cooling, taking care that the water does not reach the pot containing the seeds. Keep the other pot near the first but without cold water round it.</p> <p>Note that the seeds germinate quicker in the second pot than in the first. The germination is delayed with decrease of warmth and stops if there is no warmth at all (c.f., how "doob" grass grows in the rainy season with moisture and warmth when the latter is withdrawn in the cold season, little growth, if any, is made till February, when "warming up" begins again).</p>	<p>August and September.</p>
4	Roots attracted by water.	<p>Fill a shallow box, having a bottom of coarse muslin, with a layer of sawdust. Plant mustard seeds. Tilt the box by a block of wood under one end. Keep the sawdust watered. Note that the roots pass out at the bottom but afterwards turn towards the moist sawdust. The same experiment may be tried with wheat and gourd.</p>	<p>October.</p>
5	Mensuration..	<p>Measurement of curved lines:—</p> <p>Supply pupils with bamboo cylinders (made by cutting a long piece of bamboo into portions 2' or 3' long). Determine the circumference thus:—Wrap a piece of thin paper round the cylinders; stick a pin through the overlapping of parts of the paper and measure the distance between the pin-pricks; or wrap thread round the cylinder four or five times and measure the length of the thread dividing the length so obtained by the number of times it has been wrapped round.</p>	<p>October and November.</p>

Serial no.	Subject.	Detailed syllabus.	Month of the year in which the subject is to be taught.
		<p>Measure the perimeters of coins or other circular pieces of metal by making a mark on the rim and rolling the coin along the rule.</p> <p>Outside measurements :—</p> <p>Use a tape measure which may be made by the teacher, each boy being provided with a piece of string cut to length of the definite number of yards (e.g., four yards; then the string folded in half equal two yards and folded again half equal one yard).</p> <p>Distance to be measured and then stepped.</p> <p>Boys to find the length of an average step.</p> <p>Measurement of the dimensions of the school room or school garden. Exercises in estimating distances, and stepping to verify the guesses,</p> <p>Plans of compound to be made (the measurements being made by the use of the strings and foot-rule).</p>	November and December.
6	Flowers	<p>Examination of some of the common flowers of the seasons with reference to their various parts (revision). Functions of the different parts of a flower. Pollination and seed-productions, the primary function of the flower.</p> <p>The relationship between insects and flowers; note only certain kinds of insects visit flowers; why insects come to flowers; advantage to flowers if insect visits.</p>	January and February

Serial no.	Subject.	Detailed syllabus.	Month of the year in which the subject is to be taught.
7	Fruits and seeds.	<p>Dispersal of fruits and seeds; its reason. Seed dispersal and advantage because it prevents overcrowding.</p> <p>Dispersing agents. How dispersed:—</p> <p>(a) Wind—</p> <p>Seeds or fruits that are carried by the wind—</p> <p>(1) Parachute fruits, e.g., thistle-down, <i>kans</i>, <i>purwal</i>, <i>sar-kanda</i>.</p> <p>(2) Winged seeds, e.g., <i>kanar</i>.</p> <p>(3) Parachute seeds, e.g., cotton, <i>simal</i>, <i>madar</i>.</p> <p>(b) Animals—</p> <p>(1) Seeds enclosed in succulent fruits which are eaten by birds or animals; the seeds are ejected, sometimes at long distances away, e.g., <i>amar</i>, peas, guava, <i>jamun</i>, <i>gular</i>, <i>anjir</i>.</p> <p>(2) Seeds and fruits dispersed by attachment to animals—</p> <p>(i) Fruits with hooks, e.g., <i>latzia</i>, <i>gularu</i>, spear-moss, <i>kutta grass</i>.</p> <p>(ii) sticky seeds, e.g., <i>cordia latifolia</i>.</p> <p>(c) Explosive or ejective mechanism in the fruit itself. Seeds liberated by the bursting of fruits, e.g., <i>arhar</i>, castor, <i>gulmandi</i>, <i>oxalis</i>.</p> <p>(d) Water especially in the case of aquatic plants and also those which grow on the margins of streams.</p>	March and April.

*Equipment for object lessons.*

It is suggested that schools in which object lessons are attempted should be supplied with flower pots, if possible one between every two children, and a sufficient quantity of sawdust so as to enable scholars to see root-development. Provided that money be available it would still be better to supply the schools with germinating boxes made as in sketch below:—



*iron ribbon  
nailed to keep  
sides straight.*

These boxes are made open at the top with a pane of glass in front fitting into a groove and sloping inwards. By this means the development of roots is seen and can be measured; the difference in the branching of roots in the main group illustrated by any grass (barley, wheat, maize, rice, oats, etc., and plants such as beans, peas, gourds, etc.), can be made out. These boxes are a never failing source of interest and a valuable adjunct in teaching.

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## APPENDIX VI.

### COURSE IN HYGIENE AND TEMPERANCE.

#### Hygiene.

*How to keep well.*—How a knowledge of the working of the different parts of the body will help.

*The skeleton.*—Made up of a large number of bones. Strength of the bones. How to help the bones to grow straight and strong. How bones are joined together. What makes them move. The skull; protection for the brain. The backbone; made up of a number of bones. The position of the spinal cord. The spinal cord carries messages to and from the brain and to all parts of the body. The ribs the body's armour. The effect of food on the growth of bones. Value of games and exercises.

*What happens to the food we eat.*—Food should be chewed and mixed with saliva. Spitting a waste of saliva. The food pipe leads into the stomach. The use of the tongue while chewing. Food mixes with

juices in the stomach, afterwards passing into the bowels where it is then absorbed. Waste matter should be got rid of daily.

*The Heart and its work.*—Position of the heart. The heart a pump with walls made of muscles. Arteries and veins. Circulation of the blood. Arteries carry pure blood and veins impure blood. Heart beats. The blood. Red and white cells and the work they do. Bad air and alcohol hinder the work of the blood cells. Temperature of the body in illness and in health.

*The Lungs and their work.*—Air necessary for life. The wind-pipe. Position of the lungs. How the lungs draw in air. Fresh air necessary for a healthy life. Why we should breathe through the nose. The vice-box.

*The Skin.*—Work of the pores. Why the skin should be kept clean.

*The Teeth.*—Use of the teeth. Why they should be kept clean.

*Diseases.*—Infectious diseases caused by germs. How diseases are spread by water and insects. Causes, diagnosis, remedial and preventive measures for cholera, malaria, plague, tuberculosis, small-pox, hook-worm and leprosy.

*Personal and Domestic Hygiene.*—Cleanliness of the skin, fingers, eyes, ears, hair, teeth. Clothing and shoes. Exercise and fresh air. Ventilation and general cleanliness of the house. Storage of food and water in the house. Diet. Value of milk for babies and young children. Danger of eating overripe fruits.

*Sanitation.*—Cleanliness of the village. Pits for latrines. Water-supplies; how to keep well water pure and clean, danger of washing dirty clothes near well. Danger of flies, mosquitoes and unhealthy dogs. Disposal of dead bodies. The work of the Public Health Department.

How we can help our friends. Simple rules about common infectious diseases. Care of the sick; food for sick persons.

*First Aid.*—Snake-bite, mad dog bite, cuts and wounds, burns, poisoning, bleeding, broken bones, drowning.

NOTE.—The Teacher will teach this course from the text-book prescribed for the rural knowledge courses, namely, "Rural Knowledge for Vernacular Middle Schools Books I, II and III published by Bai Sahib Ram Dayal Agarwala, Katra, Allahabad.

Book on 'Nature Study' recommended for teachers' use—

Mubadai-Nabatat by Jagmohan Lal Chaturvedi, B.Sc., L.T., published by Jagmohan Lal Chaturvedi, B.Sc., teacher, Training College, Hyderabad (Deccan). (Re. 1.)

Book on 'Science' recommended for teachers' use—

Mashahidat-i-Science, by S. Mohammad Umar Hasani, published by Gaya Prasad and Sons, Agra. (Rs. 2 annas 4.)

## APPENDIX VIII.

## Physical Exercises.

The form of physical training is left to the discretion of head teachers; physical training not necessarily requiring the use of apparatus should be adopted.

Books recommended for teachers' use—

"Physical Drill" by J. C. Kempster and G. R. Kaye, Macmillan & Co. (12 annas).

NOTE.—Urdu and Hindi versions of the book have also been approved for use in school. (Re. 1 each.)

Ibtada-i-Scouting yani Mukammal Hidayat Tayari-o-Janch, by Khairati Lal Johri, Deputy Inspector of Schools, Bijnor. (6 annas.)

Rahnumai Scouting, by Niranjan Singh, M.Sc., Professor, Randhir College, Kapurthala (Punjab). The Mercantile Press, Lahore. Re. 1-6.

Referee Association Football in Urdu, by Chaudhri Bhawal Khan Nagra, English Master, Government High School, Sialkot. (6 annas.)

Urdu Tarjuma-i-Qawaid Football Association, by Thakar Das, Manager, S. R. Thakar Sports Works, Leiah, (Muzaffargarh). (6 annas.)

Scout Drill and Khel, Parts I and II, by Siri Ram Bajpai, published by the Indian Press, Ltd., Allahabad, first edition. (Part I, 12 annas; Part II, Re. 1-8-0.)

Vyayam Shiksha for teachers' use by Kashi Ram Dube, published by the Indian Press, Ltd., Allahabad, first edition. (12 annas.)

NOTE.—Boys taking Agricultural or Manual Training may do practical work in those subjects instead of Physical Exercises.

## Text-books.

## CLASS V.

Urdu.—Mufad-i-Urdu, Part I, by Hafiz Shah Ali Ahsan Marahravi (1st edition), published by Jafri Bros, Allahabad. (8 annas.)

or

Urdu-i-Jadid, Part I, for class V, by Mufti Muhammad Mati Ullah 'Samar' and revised by M. G. Zubaid Ahmad, published by Rai Sahib Lala Ram Dayal Agarwala, Katra, Allahabad (8 annas).

or

Shigufa-i-adab, Part II, 1930 edition, for class V, by Naimur Rahman, published by the Indian Press, Ltd., Allahabad. (5 annas.)

or

Akhtar-i-Urdu, revised edition, for class V, by Abid Hasan Faridi, published by the University Publishing House, Agra. (8 annas).

or

Ruh-i-Adab, Part I, by Ghasi Ram, M.A., published by Vidya Printing Press, Meerut, (8 annas.)

Hindi.—Bhasha Pravesha, Part II, revised 1930 edition by Rai Sahib Sukdeo Tiwari, published by the Indian Press, Limited, Allahabad. (8 annas.)

or

Sahitya Sopan, Part I, first edition, 1930, edited by Daya Shankar Dube and Ganga Narain Dwivedi, published by Lala Ram Narain Lal Katra, Allahabad. (7 annas.)

or

Hindi Shiksha, Part II, first edition, edited by Padam Singh Sharma, published by the Hindi Press, Allahabad. (8 annas.)

or

Sahitya Prasoon, Part II, revised, 1930 edition, edited by Mr. Mahendra, published by University Book Dépôt, Agra. (8 annas.)

or

Hindi Sar Sangrah, Part II, by Kali Das Kapoor, published by Agarwala Press, Allahabad. (6 annas.) (For one year.)

#### CLASS VI.

Urdu.—Mufad-i-Urdu, Part II, by Hafiz Shah Ali Ahsan Marahavi (1st edition), published by Jafri Bros., Allahabad. (8 annas.)

or

Urdu-i-Jadid, Part II, for class VI, by Mufti Muhammad Mati Ullah 'Samar' and revised by M. G. Zubaid Ahmad, published by Rai Sahib Lala Ram Dayal Agarwala, Katra, Allahabad. (8 annas.)

or

Shigufa-i-adab, Part III, 1930 edition, for class VI, by Naimur Rahman, published by the Indian Press, Limited, Allahabad. (5 annas.)

or

Paikar-i-Urdu, revised edition, for class VI, by Abid Hasan Faridi, published by the University Publishing House, Agra. (10 annas.)

or

Ruh-i-Adab, Part II, by Ghasi Ram, M.A., published by Vidya Printing Press Meerut, (8 annas.)

or

*Hindi*.—Sahitya Sopan, Part II, first edition 1930, edited by Daya Shankar Dube and Ganga Narain Dwevedi, published by L. Ram Narain Lal, Katra, Allahabad. (annas 9.)

or

Bhasha Pravesha, Part III, revised, 1930 edition, by Rai Sahib Sukhdeo Tewari, published by the Indian Press, Limited, Allahabad. (8 annas.)

or

Hindi Shiksha, Part III, first edition, edited by Padam Singh Sharma, published by the Hindi Press, Allahabad. (8 annas.)

or

Sahitya Prasoon, Part III, revised, 1930 edition, edited by Mr. Mahendra, published by University Book Dépôt, Agra. (10 annas)

or

Hindi Sar Sangrah, Part III, by Kali Das Kapoor, published by Agarwala Press, Allahabad. (8 annas) (for one year.)

CLASS VII.

*Urdu*.—\*Urdu Final Reader, published by the Agarwal Press, Allahabad. (7 annas 6 pies.)

or

Mufad-i-Urdu, Parts III and IV, by Hafiz Shah Ali Ahsan Marah-ravi (1st edition), published by Jafri Bros., Allahabad. (10 annas each.)

or

Urdu-i-Jadid, Part III, for class VII, by Mufti Muhammad Mati Ullah 'Samar' and revised by M. G. Zubaid Ahmad, published by Rai Sahib Lala Ram Dayal Agarwala, Katra, Allahabad. (10 annas.)

or

Shigufa-i-adab, Part IV, 1930 edition, for class VII, by Naimur Rahman, published by the Indian Press, Limited, Allahabad. (8 annas.)

or

Manzar-i-Urdu, revised edition, for class VII, by Abid Hasan Faridi, and Hamid Hasan Qadiri, published by the University Publishing House, Agra. (10 annas.)

or

Ruh-i-Adab, Part III, by Ghasi Ram, M.A., published by Vidya Printing Press, Meerut. (10 annas.)

*Hindi*.—\*Hindi Final Reader, published by the Agarwal Press, Allahabad. (8 annas 6 pies.)

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\*NOTE:—This book which does not form part of a series may, as a special case, be used instead of any of the three books, Bhasha Pravesha, Sahitya Prasoon and Hindi Sar Sangrah.

or

Bhasha Pravesha, Part IV, 1930 edition, by Ram Naresh Tripathi, published by the Indian Press, Limited, Allahabad. (10 annas.)

or

\*Sahitya Parichi, 1930 edition Part IV, edited by Adhyapak Ram Ratan, published by Ratna Ashram, Agra. (10 annas.)

Sahitya Prasoon, Part IV, revised, 1930 edition, edited by Mr. Mahendra, published by University Book Dépôt, Agra. (10 annas.)

or

Hindi Sar Sangrah, Part IV, by Kali Das Kapoor, published by Agarwala Press, Allahabad. (8 annas) (for one year).

Recommended for teachers' use :—

The Magazine, "Vidyarthi", published by the Hindi Press, Allahabad. (Annual subscription Rs. 3.)

Junior Course of Urdu Composition or Ibtidai Mazmun Nawisi, by Shaikh Khadim Mohi-ud-din, third English Master, Central Training School, Lahore. (8 annas.)

or

"Shahab-i-Urdu" (a monthly magazine) by Khan Ahmad Husain Khan. "The Shahab-i-Urdu," Lahore, published by Khan Nazir Ahmad Khan, Lahore. (Annual subscription Rs. 5, six-monthly Rs. 3, single copy, 9 annas.)

"Conference Gazette" in Urdu (a monthly magazine), edited by Muhammad Habib-ur-Rahman Khan Sherwani, Honorary Secretary, All-India Muhammadan Educational Conference, Aligarh. (Annual subscription, Rs. 3.)

Hindi Rachna Chandrodaya, Parts I and II, by Ram Lochan Sharan, 1st edition, Hindi Pustak Bhandar, Laheria Sarai, Darbhanga. (Part I, 15 annas; Part II, Re. 1-2.) (If both the parts are purchased at a time the price will be Rs. 2.)

Primary Hindi Rachna Pranali (Subodh Granthmala series), by Ram Sundar Sharma, Kavyatirtha, Head Pandit (Ranchi Zila School, published by Chandra Deva Prasad Sharma, Subodh Granthamala Karyalaya, Ranchi, 1925 edition. (8 annas.)

Mazmun Navisi ki nai Kitab, Parts II to V, by Bihari Lal and Lachhman Das, published by Rai Sahib M. Gulab Singh and Sons, Lahore. (4 annas, 4 annas, 5 annas and 5 pies and 4 annas 7 pies.)

Fitrati-Atfal, translated by Maulvi Hamid Hasan of Cawnpore, published by the All-India Muslim Educational Committee, Aligarh. (4 annas.)

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\*NOTE :—This book which does not form part of a series may, as a special case, be used instead of any of the three books, Bhasha Pravesha, Sahitya Prasoon and Hindi Sar Sangrah.

- Hindi Composition, by Ganga Prasad, Head Master, D. A.-V. High School, Allahabad, published by Rai Sahib Ram Dayal Agarwala, Allahabad. (12 annas.)
- Anvvd aur Vykhya, by Ram Ratna, published by Ratna Ashram, Agra. (8 annas.)
- Hindi Rachna Prabodh, by Ram Ratna. (Re. 1.)
- Hindi Sahitya Suman, Part II, by Hira Lal Sharma, published by D. J. Book Dépôt, Jodhpur. (10 annas.)
- Hindi Rachhna ki Kunji, by Vishnu Datt Bajpai, published by Vishnu Datt Bajpai, Assistant teacher, D. A.-V. High School, Allahabad. (4 annas.)
- Madhya Hindi Rachhna, by Kamta Prasad Guru, published by Ram Narain, Lal, Katra, Allahabad. (8 annas.)
- Bal Ramayana by Uma Datta Sharma, published by The Popular Trading Co., 14/1/A, Shambhu Chatterji, Street, Calcutta. (10 annas.)
- Bal Mahabharat, by Uma Datta Sharma, published by The Popular Trading Co., 14/1/A Shambhu Chatterji Street, Calcutta. (10 annas.)
- Binay Patrika, by Bhagwan Din and Bishwanath Prasad Chaube, M.A., published by Sahitya Sewak and Sahitya Bhushan Karyalaya Benares city. (1 rupee and 8 annas.)
- Sridhar Bhasha Kosh, by Sridhar Tripathi, published by Newal Kishore Press, Lucknow. (3 rupees.)
- Kashi Hindi Kosh, by Kashi Bishambhar Agarwala, published by Rai Sahib Ram Dayal Agarwala, Katra, Allahabad. (1 rupee and 8 annas.)
- Jivan Yudh, by Sri Deoki Nandan, published by S. S. Mehta & Brothers, Benares. (1 rupee.)
- Meri Iran Yatra, by Mahesh Prasad, Maulvi, Alim, Fazil, published by Alim Fazil Book Dépôt, Lanka, Benares City. (1 rupee 4 annas.)
- Sur Padyawali, published by Hindi Sahitya Sammalan, Allahabad. (4 annas.)
- Chanakya Niti Darpan, translated by Rup Narain Pandeya, published by Newal Kishore Press, Lucknow. (4 annas.)
- Pita ke patra putri ke nam, by Jawahar Lal Nehru, published by Allahabad Law Journal Press, 5 Prayag Street, Allahabad. (1 rupee and 8 annas.)
- Prachin Bhartiya Yudha our Yudha Samigri, by Vidya Bhaskar Shukla, published by Vidya Bhaskar, Daraganj, Allahabad. (4 annas.)
- Adabul Mazamin, Part II, by Nisar Ahmad, published by Jafri Bros., Allahabad. (1 rupee and 8 annas.)
- Nairang-i-fitrat, by Indrajit Sharma, published by Urdu Book Dépôt, Machhra, Meerut. (1 rupee and 12 annas.)

Muntakhabat-i-Ghalib by Muhammad Mahmud Rizbi, B.A., LL.B., published by Ram Prasad and Brothers, Booksellers, Agra. (4 annas.)

N.B.—School following curriculum I will read in Class VII, in 1934-35 only the following portions of the prescribed text-books.

*Urdu.*—Urdu Final Reader, published by the Agarwal Press, Allahabad :—

*Prose.*—1. Sair pahle wa tisare Darveshki, 2. Intikhab az Fisan-e-ajab, 3. Mirza Asad Ullah Khan Ghalib ke ruqqiat, 4. Urdu Zaban ki nazm wa Insha pardazi, 5. Bahas wa takrar wa umaid ki khushi aur civilization ya tahzib, 6. Jama-i-azhar ki ibtada'i tarikh, 7. Khial ba Muqable Zaban, and 8. Shahar khamoshan.

*Poetry.*—1. Qasida-i-Sauda, 2. Ghazliyat Mir, 3. Ghazliyat Atish wa Ghalib, 4. Qasida-i-Zauk, 5. Manajat wa Musaddas Anis, 6. Musaddas Dabir, 7. Rubaiyat, 8. Ghazliyat Akbar and 9. Ghazal wa Musaddas Iqbal wa Chakbast Lakhnawi.

or

Mufad-i-Urdu, Parts III and IV, by Hafiz Shah Ali Ahsan Marah-ravi (1st edition), published by Jafri Brothers, Allahabad :—

*Prose.*—1. Maani, 2. Raja Ashok, 3. Izzat, 4. Paris, 5. George Stenvenson and Railway Engine, 6. Abul Khumar, 7. Taswir-i-Kanaat, 8. Khud Zabti, 9. Tund mizaji ke bure nataij.

*Poetry.*—1. Fourteen lessons from page 159 to page 177. 2. Twenty-eight lessons from page 205 to page 238.

or

Urdu-i-Jadid, Part III, for class VII, by Mufti Muhammad Mati Ullah 'Samar' and revised by M. G. Zubaid Ahmad, published by Rai Sahib Lala Ram Dayal Agarwala, Katra, Allahabad.

*Prose.*—1. The first ten lessons from page 1 to page 63. 2. Hindustan ki Sanaaten and Ejaden, 3. Moghul Bagaat, 4. Zamin kaise banti hai, 5. Mutaala or Study, 6. Science.  
*Poetry.*—From lessons 10 to lesson 40.

or

Shigufa-i-adab, Part IV, 1930 edition, for class VII, Naimur Rahman, published by the Indian Press, Limited, Allahabad.

*Prose.*—1. Intkhab az Bag-o-Bahar, 2. Intkhab az Urdu-e-Muala, 3. Intkhab as Asar-e-Sanadid, 4. Intkhab az Fazana-e-Azad, 5. Intkhab az Qasas-e-Hind, 6. Intkhab az Nairang-e-Khayal, 7. Intkhab as Yadgar-e-Ghalib, 8. Intkhab az Muazanae-e-Anis and Dabir.

*Poetry*.—1. Intkhab az Kalam Khawaja Mir Drad, 2. Intkhab az kalam Khawaja Mir, 3. Intkhab az Gharib ul Watani-Subuh, Hazrat Qasim ki arzaq Pahalwan se jang, 5. Hazrat Abbas ki Aamad, Ghora, Talwar, 6. Intkhab az Gulzar-e-Dag, 7. Larkiyon ki Taalim, Jalwa-Darbar Delhi, 8. Phul mala, Qaum ke Surwaon ki Alvida, 9. Intkhab az Bang-e-dra.

or

Manzar-i-Urdu, revised edition, for class VII, by Abid Hasan Faridi, and Hamid Hasan Qadiri, published by the University Publishing House, Agra.

*Prose*.—All the lessons in prose excluding the following five lessons :—1. Bijli Kahan se aai? 2. Hon'ble Gopal Krishna Gokhele, 3. Ekdin Sham ko Chandini Chawh men. 4. Bijli kaise Qabu men aai? 5. Bijli ka Qumquma.

*Poetry*.—All the lessons in poetry occupying less than 50 pages are prescribed.

*Hindi*.—Hindi Final Reader, published by the Agarwal Press, Allahabad :—

*Prose*.—1. Hindi sahitya ka sankshipta itihas, 2. Padya prabodh, 3. Tulsi Das, 4. Lallu Lal Ji, 5. Nasiketopakhyan, 6. Raja Bhoj ka sapna, 7. Shakuntala, 8. Mira Bai, 9. Satya Harish Chandra, 10. Kal, 11. Bidesh yatra ki awashyakta, 12. Jar cheta, 13. Ram Kahani, 14. Kashmir Varnan, 15. Patna, 16. Theth Hindi ka that, 17. Chin men terah mas, 18. Samalochna, 19. Sabhyata ka bikas, and 20. Ishwar Chandra Vidyasagar.

*Poetry*.—1. Padmawat, 2. Sudama charitra, 3. Gang kavi, 4. Ram charit manas, 5. Ram chandrika (Dhanush yagya ka purvardh.), 6. Shivaji aur Raigarh, 7. Lalit lalam, 8. Deva kavi ki kavita, 9. Vrind Sat Sai, 10. Mani Deva (Jai kari chhand), 11. Megh Doot, 12. Bidur niti, 13. Ganga varnan, 14. Yamuna varnan, 15. Maharana Pratap Singh natak, and 16. Priya pravas.

or

Bhasha Pravesh, Part IV, 1930 edition, by Ram Naresh Tripathi, published by the Indian Press, Limited, Allahabad.

*Prose*.—1. Nasiketopakhyan, 2. Sudama Charitra, 3. Raja Bhoj ka sapna, 4. Himalaya Yatra, 5. Shakuntala Milan, 6. Shitya gan sammih ke hridaya ka Bikash, 7. Bat, 8. Kashmir yatra, 9. Ram Kahani, 10. Kavi aur Kavita, 11. Yogyatanukulbyabsay chunna, 12. Hindu Kantumbik

Jivan, 13. Mira Bai, 14. Hindi Natak aur Rang Shala, 15. Kavya men prakritik drisbya, 16. Hindi Sahitya aur musalman kavi, 17. Adhikar Chnita.

*Poetry*.—1. Sur Pad, 2. Raja ka Swarg Baz (Padmavast se), 2. Shri Ram Chandrajika Ajodhia men Agaman, 4. Dohe, 5. Shiva Raj Bhushan, 6. Kavitya, 7. Ganga ki Sobha, 8. Jagat Sachai Sar Samdh atan. 9. Jasvda ka Birha, 10. Nandani ka Bardan dena, 11. Angad aur Ravan, 12. Udbodhan, 13. Brij Barnan.

or

Sahitya Parichai, 1930 edition (as revised in its final form), edited by Adhyapak Ram Ratan, published by Ratna Ashram, Agra.

*Prose*.—1. Bhaghti Kavi, 2. Vishwamitra ki pratigya, 3. Chandradai, 4. Gram bas dur nagar bas, 5. Mazduri, 6. Dakshni Dhuru, 7. Sahitya ki Mahatta, 8. Bhasha Tattwa, 9. Dan, 10. Updesh, 11. Shilalekh ka Mahattva aur uski mukhe baten, 12. Ma', 13. Sri Krishna ka Uddesh, 14. Khodh, 15. Alaukrit Vakyaarachna.

*Poetry*.—1. Bal Lila (Sur daske pad) 2. Bharat-binai-Ram batohi, 3. Dohe, 4. Dohe, 5. Shivaraj Bhusan, 6. Kavitta, 7. Jumna varnan Sanjh, 8. Dhan vinai, 9. Bund, Phul, Tinka, 10. Matre Bhumi Bandwa, 11. Kissa Gautami (Budh se bhent), 12. Bharat varsha ki Sreshtanta Nidaghya Varnan.

or

Sahitya Prasoon, Part IV, revised, 1930 edition, edited by Mr. Mahendra published by the University Book Dépôt, Agra.

*Prose*.—1. Meru Prabha, 2. Sabhyala ka Vikash, 3. Sudharak, 4. London ki Sair, 5. Chandra Gupta (Natak), 6. Jawani ki Umangen, 7. Kashi ki Shobha', 8. Bhushna Kavi, 9. Vyyam, 10. Africa ke Baune, 11. Nyaya aur daya' (Nata), 12. Kumbha, 13. Arkwaright, 14. Sadhu Tuka Ram, 15. Prithvi ki Parikrama, 16. Kali Das ki Katha-yen, 17. Napoleon Bonaparte.

*Peotry*.—1. Iswar Gun'm, 2. Bharat Git, 3. Brajesh Viyog, 4. Basant, 5. Nidra, 6. He Arsh Bharat, 7. Lakhman Parasu Ram Sambad, 8. Ganga Barnan, 9. Savaiye, 10. Mayank Mahima, 11. Dohe, 12. Bhraman git, 13. Sur Das ke pad, 14. -Os, 15. Nar ho no nirash kao man ko, 16. A'sha, 17. Tulsi Das, 18. Bhushan ke Kavita, 19. Bhramar Duta, 20. Prakrit Saundarya, 21. Raskhan ke Savaiya, 22. Matra Bhumi, 23. Tum aur main, 24. Dhani ka Sankat, 25. Parshasta Path, 26. Susamai, 27. Bharti Vidarathi.

The following dictionaries are recommended for use of teachers and boys :—

Shabdarth Paryat Kosh, published by Ram Narayan Lal, Allahabad. (Rs. 3.)

Gutka Hindi Kosh, published by Ram Narayan Lal, Allahabad. (Re. 1-8-0.)

Hindi Shabda Kalpadrum, published by Rai Sahib Ram Dayal Agarwala, Allahabad. (Rs. 3.)

Grammars.

CLASSES V TO VII.

*Urdu*.—Risala-i-Qawaid-i-Urdu, Part II, published by Rai Sahib Munshi Gulab Singh and Sons, Lahore. (3 annas 9 pies.)

or

Tahzib-ul-Qawaid, Part II, for Classes V to VII of Vernacular Schools, by M. H. S. Jalal-ud-din Ahmad Jafri, published by the Indian Press, Ltd., Allahabad. (5 annas.)

or

Zawabit-i-Urdu, Part II, 1930 edition, by Mohammad Zainul Abidin Farjad, published by Kedar Nath and Sons, Booksellers and Publishers, Meerut. (6 annas.)

Mukhtasar Qawaid, Part II, by Hafiz Sami-Ullah Khan, M.A., published by Rai Sahib Ram Dayal Agarwala, Katra, Allahabad. (8 annas.)

*Hindi*.—Hindi Middle Vyakaran, published by the Agarwal Press, Allahabad. (4 annas 9 pies.)

or

Madhyamik Vyakaran for Classes V to VII of Vernacular Schools, by Ram Ratan Adhyapak, published by the Hindi Press, Allahabad. (8 annas.)

or

Madhya Hindi Vyakaran, by Kamta Prasad Guru, published by the Indian Press, Allahabad. Sixth edition. (8 annas.)

or

Bhasha Vyakaran Bodh, by Chandra Mauli Shukla, 1st edition, published by Nand Kishore and Bros., Chowk, Benares. (10 annas.)

Hindi Vyakaran Shiksha, by Bhagirath Prasad Dikshit, published by Ram Narain Lal, Katra, Allahabad. (8 annas.)

Books recommended for teachers' use :—

*Urdu*.—Grammar, Parts I and II, by Muhammad Ismail, published by Muhammad Aslam Saifi, Meerut. (Part I, 2 annas; part II, 5 annas.)

Urdu sarf wa Naho Middle, ba Tarz Jadid for Middle Classes by Bishen Das Puri, Lachhman Das Anand, and Sardar Ali, published by Rai Sahib M. Gulab Singh and Sons, Lahore, 1926 edition. (9 annas 11 pies.)

**Patriotic poems.**

CLASSES V TO VII.

The following books containing patriotic poems are recommended for class use in schools—

*Hindi.*

1. Swadesh Gan, Part III (on cream wove) for classes V, VI and VII of Vernacular Schools, published by the Bhargava School Book Dépôt, Lucknow. (6 pies.)

2. Swadesh Gan, Part III (on white printing) for classes V, VI and VII of Vernacular Schools, published by the Bhargava School Book Dépôt, Lucknow. (5 pies.)

3. Bharat Gan, Part III (coloured cover without illustrations) for classes VI and VII of Vernacular Schools, published by the Standard Press, Allahabad. (9 pies.)

4. Swadesh Sangit, Part III (with cover on art paper with notes and illustrations) for classes V, VI and VII of Vernacular Schools, published by the Indian Press, Allahabad. (1 anna 6 pies.)

5. Swadesh Sangit Part III (with 60 lb. cover and without illustration and notes) for classes V, VI and VII of Vernacular Schools, published by the Indian Press, Allahabad. (9 pies.)

6. Swadesh Prem, Part III (illustrated) for classes V, VI and VII of Vernacular Schools, published by Rai Sahib Lala Ram Dayal Agarwala, Allahabad. (9 pies.)

7. Swadesh Prem, Part III (unillustrated) for classes V, VI and VII or Vernacular Schools, published by Rai Sahib Lala Ram Dayal Agarwala, Allahabad. (6 pies.)

8. Hindustani Bachchon ke Gane, Part III (with illustrations on ivory finish paper and cover in one colour) for classes V, VI and VII of Vernacular Schools, published by the Hindustani Book Dépôt, Lucknow. (1 anna.)

9. Hindustani Bachchon ke Gane, Part III (with illustrations on art paper and coloured border on each page and two-coloured title) for classes V, VI and VII of Vernacular Schools, published by the Hindustani Book Dépôt, Lucknow. (1 anna 6 pies.)

10. *Desh ke Git*, Part III for classes V, VI and VII of Vernacular Schools, published by the Shishu Press, Allahabad. (9 pies.)
11. *Swadeshi Gan*, Part III, for classes V, VI and VII of Vernacular Schools, published by the Saraswati Publishing House, Agra. (1 anna.)
12. *Swadesh Gitawali*, Part III for classes V, VI and VII of Vernacular Schools, published by the Newal Kishore Press, Lucknow. (1 anna.)
13. *Hindustani Git*, Part III for classes V, VI and VII of Vernacular Schools, published by the School Book and Apparatus Dépôt, Lucknow. (1 anna.)
14. *Patriotic Poems in Hindi*, Part III for classes V, VI and VII of Vernacular Schools, published by P. C. Dwadesh Shreni and Co., Aligarh. (4 pies.)
15. *Desh Bandana*, Part III for classes V, VI and VII of Vernacular Schools, published by Agarwal Brothers and Co., Allahabad. (6 pies.)
16. *Rashtri Gan*, Part III, (cheap edition), for classes V, VI and VII of Vernacular Schools, published by Gautama Brothers and Co., Cawnpore. (9 pies.)
17. *Rashtri Gan*, Part III (picture edition), for classes V, VI and VII of Vernacular Schools, published by Gautama Brothers and Co., Cawnpore. (1 anna 3 pies.)

#### *Urdu.*

1. *Watan ki Yad*, Part III for classes V, VI and VII of Vernacular Schools, published by the Newal Kishore Press, Lucknow. (1 anna.)
2. *Patriotic Poems*, Part III for classes V, VI and VII of Vernacular Schools, published by Lala Ram Narain Lal, Allahabad. (1 anna.)
3. *Watan ke Rag*, Part III (illustrated) for classes V, VI and VII of Vernacular Schools, published by the Indian Press, Allahabad. (1 anna 6 pies.)
4. *Watan ke Rag*, Part III (unillustrated) for classes V, VI and VII of Vernacular Schools, published by the Indian Press, Allahabad. (1 anna.)
5. *Watan ke Git*, Part III, for classes V, VI and VII of Vernacular Schools, published by the Saraswati Publishing House, Agra. (1 anna.)
6. *Tarana-i-Watan*, Part III (coloured cover without illustrations) for classes V, VI and VII of Vernacular Schools, published by the Standard Press, Allahabad. (9 pies.)
7. *Patriotic Poems in Urdu*, Part III for classes V, VI and VII of Vernacular Schools, published by P. C. Dwadesh Shreni & Co., Aligarh. (9 pies.)

8. Hubb-i-Watan in Urdu, Part III (illustrated) for classes V, VI and VII of Vernacular Schools, published by Rai Sahib Lala Ram Dayal Agarwala, Allahabad. (9 pies.)

9. Hubb-i-Watan in Urdu, Part III (unillustrated) for classes V, VI and VII of Vernacular Schools published by Rai Sahib Lala Ram Dayal Agarwala, Allahabad. (6 pies.)

10. Watan ke Git, Part III for classes V, VI and VII of Vernacular Schools, published by the Shishu Press, Allahabad. (9 pies.)

11. Sarood-i-Watan, Part III (picture edition), for classes V, VI and VII of Vernacular Schools, published by Gautama Brothers & Co., Cawnpore. (1 anna 3 pies.)

12. Sarood-i-Watan, Part III (cheap edition), for classes V, VI and VII of Vernacular Schools, published by Gautama Brothers & Co., Cawnpore. (9 pies.)

13. Watan ka Tarana, Part III for classes V, VI and VII of Vernacular Schools, published by the Bhargava Book Agency, Allahabad. (1 anna.)

#### Arithmetic.

##### CLASSES V TO VII.

*Urdu*.—Modern Vernacular Arithmetic, Book III, by Jwala Sahai Gupta, published by the School Book and Apparatus Dépôt, Lucknow.

or

Blackie's Arithmetic, Book III, by Ram Swarup Vaish, published by Blackie and Son.

or

Longman's Vernacular School Arithmetic, Part III, by K. C. Bhattacharya, Longmans, Green & Co., Calcutta. (13 annas.)

The National Press Vernacular Middle Schools Arithmetic (Urdu), by P. L. Srivastava, M.A.D. PHIL. (OXON), published by Ram Narain Lal, Katra, Allahabad. (12 annas) (with answers).

Vernacular Final Arithmetic (Urdu), published by Agarwala Press, Allahabad. (7 annas 6 pies.)

*Hindi*.—Modern Vernacular Arithmetic, Book III, by Jwala Sahai Gupta, published by the School Book and Apparatus Dépôt, Lucknow.

or

Blackie's Arithmetic, Book III, by Ram Swarup Vaish, published by Blackie and Son.

or

Longman's Vernacular School Arithmetic, Part III, by K. C. Bhattacharya, Longmans, Green & Co. (12 annas.)

or

The National Press Vernacular Middle Schools Arithmetic (Hindi), by P. L. Srivastava, M.A.D. PHIL. (OXON), published by Ram Narain Lal, Katra, Allahabad. (12 annas) (with answers).

or

Vernacular Final Arithmetic (Hindi), published by Agarwala Press, Allahabad. (6 annas.)

Books recommended for teachers' use :—

*Arithmetic*.—Shiksha Pranali in Hindi and Urdu by K. C. Bhattacharya and Chandra Mauli Shukul, Indian Press, Allahabad. (12 annas each.)

Co-operative (Sahkari) Usul-i-Amal in questions and answers, by Munshi Shiva Charan Lal, Model Houses, Lucknow. The Indian Literary Institute, 458, Ganeshganj, Lucknow. 2nd edition. (6 annas.)

Vanija Vikash, by Manna Lal Awasthi, Manager and Headmaster, Ganga Din Gauri Shankar Vaishya Pathshala, Khapra Mohal, Cawnpore. (8 annas.)

Mahajani Hindi Kitab ka Bahi Khata in Hindi for Classes IV to VII of Vernacular Schools by Suraj Narayan Mathur, Headmaster, Government Normal School, Allahabad, published by Rai Sahib Ram Dayal Agarwala, Katra, Allahabad. (6 annas.)

Bahi Khata Shiksha, Part I, for Classes IV to VII of Vernacular Schools by Bal Govind Vaishya, Teacher, Town School, Karwi, 1924 edition. (3 annas.)

Arithmetic Bahi Khata, Urdu and Hindi, by Sagar Mal and Ram Kunwar Agarwala (1927 edition), published by Gupta Bros. & Co., Mandi Dhanaura, Moradabad, (annas 4 each.)

Navin Anka Ganit Shiksha Pranali, Part I, by Kesari Mal Sharma, published by Gokul Chand Sharma, Gitapathi, D. J. Book Dépôt, Judhpur. (annas 6 and pies 6.)

Mahajani Tariqe ka Bahi Khata in Hindi and Mahajani Bahi Khata in Urdu, by Chandu Lal Vaish, Post Office Kairana, district Muzaffarnagar. (5 annas each.)

### Geometry.

#### CLASS V.

Elements of Geometry, Part I (in Urdu or Hindi), revised edition, by A. E. Pierpoint, published by the Indian Press, Limited, Allahabad. (4 annas 6 pies each.)

or

School Geometry, Parts I, II and IV in one volume in Urdu by H. S. Hall and F. H. Stevens, Re. 1 and annas 2, or the same in Hindi (Price, 15 annas), published by Macmillan & Co.

or

Modern Vernacular Geometry, Part I, in Urdu, School Book and Apparatus Dépôt, 406, Fatehganj, Lucknow. (5 annas.)

or

Primer of Geometry, Part I, in Urdu or Hindi, by Deb Narain Mukerji, published by Oxford University Press, Calcutta. (5 annas each.)

or

Practical Geometry (Urdu and Hindi) by Shyam Behari Lal Kapur, 1928 edition, published by Agarwal Press, Allahabad (annas 4 Hindi, annas 4 and pies 6 Urdu.)

#### CLASS VI.

Elements of Geometry, Part II (in Urdu or Hindi), revised edition, by A. E. Pierpoint, published by the Indian Press, Limited, Allahabad. (14 annas each.)

or

School Geometry, Parts I, II and IV, in one volume in Urdu, by H. S. Hall and F. H. Stevens, Re. 1 and annas 2 or the same in Hindi. (Price, 15 annas), published by Macmillan & Co.

or

Modern Vernacular Geometry, Part II, in Urdu, and Hindi, School Book and Apparatus Dépôt, 406, Fatehganj, Lucknow. (8 annas.)

or

Primer of Geometry, Parts II and III, in Urdu or Hindi, by Deb Narain Mukerji, published by Oxford University Press, Calcutta. (14 annas each version.)

or

Analytic Geometry (Hindi and Urdu), by Shyam Behari Lal Kapur (1928 edition), published by Agarwal Press, Allahabad (annas 14 Hindi, Re. 1 Urdu.)

#### CLASS VII.

Elements of Geometry, Part II (in Urdu or Hindi), revised edition, by A. E. Pierpoint, published by the Indian Press, Limited, Allahabad. (14 annas each.)

or

School Geometry, Parts I, II and IV in one volume in Urdu by H. S. Hall and F. H. Stevens, Re. 1 and annas 2 or the same in Hindi. (Price, 15 annas) Macmillan & Co.

or

Modern Vernacular Geometry, Part III, in Urdu and Hindi, School Book and Apparatus Dépôt, 406, Fatehganj, Lucknow. (11 annas each.)

or

Primer of Geometry, Parts II and III, Urdu or Hindi, by Deb Narain Mukerji, published by Oxford University Press, Calcutta. (14 annas each version.)

or

Analytic Geometry (Hindi and Urdu), by Shyam Behari Lal Kapur (1928 edition), published by Agarwal Press, Allahabad (annas 14 Hindi, Re. 1 Urdu.)

Book recommended for teacher's use :—

Prathmic Rekhaganit (Godfrey and Siddon's Geometry), Part I, in Hindi, Macmillan & Co. (12 annas.)

History (for schools taking curriculum II).

CLASS V.

Mashaheer-i-Tarikh-i-Hind (reprinted edition) in Urdu or Bharatiya Itihas charitawali in Hindi, by Dr. Ishwari Prasad, published by the Indian Press, Allahabad. (Re. 1 each.)

or

Hindustan ki Tarikh-i-Kahaniyan, revised edition, by Kali Das Kapur, M.A., L.T., published by Newal Kishore Press, Lucknow. (14 annas) (for one year only).

or

Bharatiya Itihas ke Kahaniyan, revised edition, by Kali Das Kapur, M.A., L.T., published by Newal Kishore Press, Lucknow. (12 annas) (for one year only).

or

Hind ke Jan Nisar (Heroes of India), revised and improved edition, by Suraj Narain Mathur, published, by Rai Sahib Ram Dayal Agarwala, Allahabad. (Re. 1) (for one year only).

or

Bharat ke Saput (Heroes of India), revised and improved edition, by Suraj Narain Mathur, published by Rai Sahib Ram Dayal Agarwala, Allahabad. (Re. 1) (for one year only).

or

Hind ke Chand Sartaj, in Urdu, or Bhartiya Itihas ke kuchh Ratna, in Hindi, by Jai Deo Singh and Amir Chand Mehra, published by the City Book House, Meston Road, Cawnpore. (Re. 1 each version.)

CLASS VI.

*Urdu.*—Tarikh-i-Hind, Part I, by E. Marsden and Lala Jiya Ram, published by Macmillan & Co., 1922 edition, revised. (Re. 1.)

or

Tarikh-i-Hind (Elementary History of India), Part I, revised edition, by Dr. Ishwari Prasad, M.A., LL.B., D.LITT., published by Indian Press, Allahabad. (Re. 1) (for one year only).

or

Hindustan ki Ibtadai Tarikh, Part I, revised edition, by Kali Das Kapoor, published by Newal Kishore Press, Lucknow. (14 annas) (for one year only).

*Hindi.*—Bharat Varsha ka Itihas, Part I, by E. Marsden and Lala Sita Ram, B.A., published by Macmillan & Co., 1922 edition, revised edition. (12 annas.)

or

Bharat Varsh ka Prarambhik Itihas, Part I, revised edition, by Kali Das Kapoor, M.A., L.T., published by Newal Kishore Press, Lucknow. (12 annas) (for one year only).

or

Bharat Varsh ka Saral Itihas (Elementary history of India), Part I, revised edition, by Dr. Iswari Prasad, M.A., LL.B., D.LITT., published by Indian Press, Ltd., Allahabad. (Re. 1) for one year only).

CLASS VII.

*Urdu.*—Tarikh-i-Hind, Part II, by E. Marsden and Lala Jiya Ram, published by Macmillan & Co., 1922 edition, revised. (Re. 1.)

or

Hindustan ki Ibtadai Tarikh, Part II, revised edition, by Kali Das Kapur, published by Newal Kishore Press, Lucknow. (14 annas) (for one year only).

or

Tarikh-i-Hind (Elementary History of India) Part II (Revised edition) by Dr. Ishwari Prasad, M.A., LL.B., D.Litt., published by Indian Press, Ltd., Allahabad. (As. 14). (For one year only.)

*Hindi.*—Bharat Varsha ka Itihas, Part II, by E. Marsden and Lala Sita Ram, B.A., published by Macmillan & Co. (12 annas.)

or

Bharat Varsh ka Prarambhik Itihas, Part II, revised edition, by Kali Das Kapoor, M.A., L.T., published by Newal Kishore Press, Lucknow. (12 annas) (for one year only).

or

Bharatvarsh ka Saral Itihas (Elementary History of India) Part II, revised edition by Dr. Ishwari Prasad, M.A., LL.B., D.Litt., published by Indian Press, Ltd., Allahabad. (As. 14) (for one year only).

#### History (for schools taking curriculum I).

The following books are recommended for the use of classes V, VI and VII :—

Bharat Varsh ka Saral Itihas (Elementary History of India), Part II, revised edition, by Dr. Ishwari Prasad, M.A., LL.B., D.L.TT., published by Indian Press, Ltd., Allahabad. (14 annas) (for one year only).

or

Tarikh-i-Hind (Elementary History of India), Part II, revised edition, by Dr. Ishwari Prasad, M.A., LL.B., D.L.TT., published by Indian Press, Allahabad. (14 annas) (for one year only).

Bharat Varsh ka Itihas, Part II, by E. Marsden and Sita Ram, published by Macmillan and Co. (12 annas).

or

Tarikh-i-Hind, Part II, by E. Marsden and Jiya Ram, published by Macmillan & Co. (Re. 1.)

or

Ibtidai Tarikh Hindustan, Part II, by Kali Das Kapur, revised edition, published by Newal Kishore Press, Lucknow. (14 annas.)

or

Bharat Varsh ka Parambhik Itihas, Part II, revised edition, by Kali Das Kapoor, M.A., L.T., published by Newal Kishore Press, Lucknow. (12 annas) (for one year only).

#### Geography.

##### CLASSES V TO VII.

Urdu.—Vernacular School Jughraphia, Parts II—IV, in Urdu, revised 1930 edition, by Madan Lal Jain, published by Macmillan & Co., Ltd., Calcutta. (Part II, 9 annas; Part III, 10 annas; Part IV, Re. 1-6.)

or

Longman's Vernacular School Jughraphia, Parts II to IV in Urdu revised edition, by H. B. Wetherill, M.A., published by Messrs. Longman Green and Co., Calcutta. Parts II and III, 9 annas, Urdu or Hindi each; Part IV, Re. 1 annas 4, Urdu or Hindi each.)

or

Vernacular School Jughraphia for classes V to VII in Urdu, by Ram Narain Misra, B.A., published by Rai Sahib Munshi Gulab Singh and Sons, Lahore, and Allahabad. (9 annas, class V, Urdu, class VI Urdu, 8 annas and class VII, Urdu edition, 13 annas) (for one year only).

or

National Press ka Vernacular School Jugraphia, Parts II to IV in Urdu, by Munshi Lal Agarwala, published by the National Press, Allahabad. Part II, 8 annas; Part III, 7 annas; Part IV, 12 annas.)

or

Hindustan ka Ibtedai Jughrapia (revised), Part II, for class V, Asia ka Ibtedai Jughrapia (revised), Part III for class VI, Dunya ka Mukhtasar Jughrapia (revised), Part IV for class VII, in Urdu, by Daya Maheshwar Dayal and Sripati Prasad, published by the Indian Press, Ltd., Allahabad. (Part II, annas 9; Part III 10 annas and Part IV, 12 annas.)

*Hindi*.—Vernacular School Bhugol, Parts II—IV, in Hindi, revised 1930 edition, by Madan Lal Jain, published by Macmillan & Co., Ltd., Calcutta. (Part II, 6 annas; Part III, 8 annas; Part IV, Re. 1.)

or

Longman's Vernacular School Bhugol, Parts II to IV in Hindi, revised edition, by H. B. Wetherill, M.A., published by Messrs. Longmans Green & Co., Calcutta. (Parts II and III, Urdu or Hindi, 9 annas each; Part IV, Re. 1 annas 4, Urdu or Hindi each.)

or

Vernacular School Bhugol for classes V to VII in Hindi, by Ram Narain Misra, B.A., published by Rai Sahib Munshi Gulab Singh and Sons, Lahore, Allahabad. (8 annas class V; 7 annas 6 pies class VI, Hindi; 13 annas, class VII, Hindi (for one year only).

or

National Press ka Vernacular School Bhugol, Parts II to IV, in Hindi, by Munshi Lal Agarwala, published by the National Press, Allahabad. (Part II, 8 annas; Part III 7 annas and Part IV 12 annas.)

or

Hindustan ka Parambhik Bhugol, Part II for class V, Asia ka Parambhik Bhogol, Part III, for class VI, Prithvi ka Shankshipt Verman, Part IV, (revised) for class VII, in Hindi by Daya Maheshwar Dayal and Sripati Prasad, published by the Indian Press, Ltd., Allahabad. (Part II 9 annas; Part III 10 annas and Part IV 12 annas.)

Books recommended for teachers' use :—

Middle Class Geography, Parts I and II, in one volume, in Urdu, for Standard V, by E. Marsden. Macmillan & Co. (10 annas.)

Middle Class Geography, Part III, in Urdu for Standard VI, by E. Marsden. Macmillan & Co. (13 annas 6 pies.)

Middle School Geography, Eurasia, for Standard V, in Urdu, by C. Morrison. Macmillan & Co. (8 annas.)

Middle School Geography, for Standard VI—Africa, Australasia and the New World in Urdu, by C. Morrison. Macmillan & Co. (Re. 1.)

Middle Class Geography, Parts I and II in one volume in Hindi for Standard V, by E. Marsden. Macmillan & Co. (10 annas.)

Middle Class Geography, Part III, in Hindi for Standard VI, by E. Marsden. Macmillan & Co. (10 annas 6 pies.)

Middle School Geography, Eurasia, for Standard V, in Hindi, by C. Morrison, Macmillan & Co. (10 annas.)

Middle School Geography for Standard VI—Africa, Australasia and the New World, in Hindi, by C. Morrison, Macmillan & Co. (Re. 1-4.)

Bhugol Bhaskar, by Ram Pratap Singh and Ram Palat Singh, Udai Pratap College, Benares. (Re. 1-4.)

Anokhi Duniya, Part II, by Munshi Lall Agarwala, published by Macmillan & Co., Calcutta. (10 annas.)

Adbhut Sansar, Part II, by Munshi Lal Agarwala, published by Macmillan and Co., Calcutta. (12 annas.)

### **Agriculture.**

#### **CLASSES V TO VII.**

##### *Hindi books.*

Zaraiti Readers, Parts I and II, by Deo Datt Sharma, published by Vishwa Nath & Co., Booksellers, Basti. (Re. 1-7.)

Meston Zaraiti Readers, Parts I, II and III, by Khan Sahib M. Abdul Qayum, Store-keeper, Agriculture College, Cawnpore. (Re. 1-12.)

Krishi Shastra, by Tej Shankar Kochak, published by Krishi Shastra Office, Walipura, Bulandshahr. (Rs. 2.)

##### *Urdu books.*

Zaraiti Readers, Parts I and II, by Deo Datt Sharma, published by Vishwa Nath & Co., Booksellers, Basti. (Re. 1-7.)

Meston Zaraiti Readers, Parts I, II and III, by Khan Sahib M. Abdul Qaiyum, Store-keeper, Agriculture College, Cawnpore. (Rs. 2.)

Rahbari Zarait by Tej Shankar Kochak, published by Krishi Shastra Office, Walipura, Bulandshahr. (Rs. 2-8.)

### **Agriculture.**

#### *For the use of teachers.*

Zaraiti Readers, Parts I and II, in Urdu and Hindi, by Deo Datt Sharma, published by Vishwa Nath & Co., Booksellers, Basti. (Re. 1-7 each part both versions).

Meston Zaraiti Readers, Parts I, II and III in Urdu and Hindi, by Khan Sahib M. Abdul Qayum, Store-keeper, Agriculture College, Cawnpore. (Rs. 2, Urdu version each part, Re. 1-12; Hindi version each part).

Krishi Shastra, by Tej Shankar Kochak, published by Krishi Shashtra, Office, Walipura, Bulandshahr. (Rs. 2.)

Rahbari Zarait by Tej Shankar Kochak, published by Krishi Shastra Office, Bulandshahr. (Rs. 2-8.)

Bagghbani by Banbower, published by the Hindi Press, Allahabad. (12 annas.)

Goras Gobardhan Shastra, by B. K. Ghare, published by Ganga Pustak Mala Karyala, Lucknow. (Rs. 2.)

Khad, by Mukhtar Singh, Vakil, published by Ganga Pustak Mala Karyala, Lucknow. (Re. 1.)

Bhartiya Arthshastra, Parts I and II, by Bhagwan Das Kela, published by Ganga Pustak Mala Karyala, Lucknow. (Rs. 2-8.)

Pamaish, by Nand Lal Murlidhar, published by Rai Sahib Ram Dayal Agarwala, Katra, Allahabad. (Re. 1.)

Krishi Lekha, by Tej Shankar Kochak, published by Krishi Shastra Office, Walipura, Bulandshahr. (12 annas.)

Udyan, by Shankar Rao Joshi, published by Ganga Pustak Mala, Karyalaya, Lucknow. (Re. 1-12.)

The re-making of village, India, by F. L. Brayne, Deputy Commissioner, Gurgaon, published by the Oxford University Press, Bombay. (Re. 1-4 each) (Urdu and Hindi.)

Sabzi Tarkari, by Debi Dayal, published by the Imperial Book Dépôt, Delhi. (Re. 1-4.)

Phool, by Debi Dayal, published by the Imperial Book Dépôt, Delhi. (Re. 1-8.)

Phal, by Debi Dayal, published by the Imperial Book Dépôt, Delhi. (Re. 1-4.)

Ghas Chara, by Debi Dayal, published by the Imperial Book Dépôt, Delhi. (10 annas.)

Fun Poultry Farming, by Khwaja Nafis Hasan Ansari, Agricultural College, Cawnpore. (Rs. 2-8.)

Zaraiti Tarraqiyat, by Tej Shankar Kochak, published by Krishi Shastra Office, Walipura, Bulandshahr. (6 annas.)

Aeena-i-Pamaish, by Nand Lal Murli Dhar, published by Rai Sahib Ram Dayal Agarwala, Katra, Allahabad. (Re. 1.)

A. H. MACKENZIE, M.A., C.I.E.,

*Director of Public Instruction,*

*United Provinces.*

ALLAHABAD :

February 29, 1932.



**Curriculum for Vernacular Primary Schools for Boys,  
United Provinces, for 1932-33.**

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The following points regarding the curriculum should be carefully noted :—

**ARITHMETIC.**

**CLASS IV.**

Simple lessons in account-keeping (*roznamcha* and *khata*) should be introduced wherever the teacher is capable of giving such instruction.

*Object Lessons.*

In no case is the course to be introduced in a school unless the inspecting officer is satisfied that there is a teacher on the staff who is competent to teach it. Where no such teacher is available, object lessons should be given according to existing practice.

*Books recommended for teachers' use :—*

Prakriti Nirikshan (Nature study books), Parts 1 to 3, by the late Babu Manik Chand Gupta. Babu Har Charan Das Bhargava, Manager, Bhargava School Book Dépôt, Aminabad Park, Lucknow. (Re. 1.)

Prakriti Nirikshan ki Shiksha Deepika, by Babu Deb Narayan Mukerji, Professor, Training College, Allahabd. Oxford University Press, Calcutta. (10 annas.)

Risala Mutala Qudrat for teachers, by Babu Deb Narayan Mukerji, Lecturer, Training College, Allahabad, Oxford University Press, Calcutta. (10 annas.)

"Baghbani" (in Hindi), published by the Hindi Press, Allahabad. (Revised edition). (8 annas.)

## CURRICULUM FOR VERNACULAR PRIMARY SCHOOLS FOR BOYS FOR 1932-33.

### PREPARATORY SECTION.

**NOTE.**—In the preparatory and lower primary sections the teacher will give practical instruction in hygiene by seeing that the boys' bodies, hair, nails, teeth and clothes are clean; that their hair is free from nits; that the boys keep their nails short and do not bite them; that boys whose sight is not good are not required to strain their eyes, but that the parents are advised to provide them with spectacles; that the parents of boys whose teeth are carious are advised to take the boys to a dentist; that clean pure drinking water is available; that the class-room is clean, tidy and well-ventilated and that the boys help to keep it so. The teacher should himself set an example of healthy living.

### Infant Class.

#### 1. *Conversation.*

- (1) Simple conversation about familiar objects, actions and simple pictures.
- (2) Illustrative movement, imitation and play.

#### 2. *Reading.*

- (1) To read at sight with correct pronunciation, words and sentences from the text-books and to know the meaning of words.
- (2) To recognize all the simple and compound characters at sight.

**N.B.**—(i) Reading sheets and the blackboard should be frequently used.

(ii) The boys should practise word-building by means of brick and cardboard letters.

#### 3. *Writing.*

**N.B.**—The teaching of writing should begin when words and letters can be recognized by the children.

- (1) To copy in sand, clay and on mud bricks the forms of the letters read.
- (2) To copy on ruled *takhtis* from the blackboard from large sheets or from head lines written on *takhtis* by the teachers or from printed writing slips in large hand characters and easy monosyllables, and also to write to dictation words and sentences from the text.

#### 4. *Arithmetic.*

- (1) Notation and numeration to 1,000.
- (2) Simple addition and subtraction; answers not to exceed 3 figures.
- (3) Construction and memorising of tables up to  $16 \times 10$ .
- (4) Simple multiplication and division by numbers not greater than 9.
- (5) Simple oral and written problems on the above.

**NOTE.**—(1) Notation and numeration from 1 to 15 to be taught by means of concrete objects (seeds of Andi and Imli, berries, beads, sticks, flowers and leaves, coins, shells, Reethas, etc.).

Stress should be laid on the analysis of the numbers 1 to 20, with oral practice in addition and subtraction.

(2) Individual work to be done by the pupils in counting, adding, subtracting, etc., by means of concrete objects; easy and interesting arithmetical games should be played.

5. *Object lessons*.—As in the scheme prescribed (vide Appendix IV).
6. \**Drawing*.—To draw simple outlines of common objects with varied material. Drawings on *takhtis* should be done with chalk; drawings on the ground with seeds, thread, grass, reeds, sticks, etc.
7. *Physical exercises*.—As prescribed in Appendix III.

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LOWER PRIMARY SECTION.

Class I.

1. *Reading*.—To read accurately at sight from the text-book and to explain the meanings of words and sentences. To recite 40 lines of poetry.
2. *Writing*.—To write on *takhtis* sentences to dictation from the text-book. Copy-slips should be used.
3. *Arithmetic*.—Notation and numeration extended. The four simple rules, addition and subtraction in Indian money; answers not to exceed Rs. 1,000. Ideas of fractions  $\frac{1}{2}$ ,  $\frac{1}{3}$ ,  $\frac{2}{3}$  to be taught by concrete examples. Tables up to  $10 \times \frac{1}{4}$ ,  $10 \times \frac{1}{2}$ ,  $10 \times \frac{3}{4}$  to be constructed and learnt.
4. *Object lessons*.—As in the scheme prescribed (vide Appendix IV).
5. \**Drawing*.—As prescribed in Appendix II.
6. *Physical exercises*.—As prescribed in Appendix III.

Class II.

1. *Reading*.—To read accurately at sight from the text-book and to explain the meanings of words and sentences. To recite 60 lines of poetry.
2. *Writing*.—To write on paper sentences to dictation. Copy-slips should be used. Simple letters to be composed and written by boys.
3. *Arithmetic*.—The four compound rules in Indian money and weights and measures in common use with miscellaneous examples. Indian symbols for sums in money and weights also to be taught.

NOTE.—Boys reading Nagri will learn the Hindi symbols and those reading Urdu will learn the raqams, but any boy may learn both.

Tables up to  $20 \times \frac{1}{4}$ ,  $\frac{1}{2}$ ,  $\frac{3}{4}$ ,  $1\frac{1}{4}$ ,  $1\frac{1}{2}$ ,  $2\frac{1}{2}$  to be constructed and learnt.

4. *Geography*.—The meaning and use of a map; the points of the compass; explanation of simple geographical terms by reference to a map or diagram. Illustrations by means of models to be encour-

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\* This subject is optional.

aged. Teachers should be required to draw large scale maps of the village to be fastened to the wall and used with the class.

5. *Object lessons*.—As in the scheme prescribed (vide Appendix IV).

6. *\*Drawing*.—As prescribed in Appendix II.

7. *Physical exercises*.—As prescribed in Appendix III

#### UPPER PRIMARY SECTION.

##### Class III.

1. *Reading*.—To read at sight from the text-books and to explain the words and sentences. To recite 80 lines of poetry from the literary reader. Practice in reading simple specimens of script (Urdu only).

2. *Grammar*.—Oral teaching of elementary grammar in its practical application.

3. *Writing*.—To write passages to dictation from the text-books or from books of equal difficulty. Copy-books or slips to be used. Letters to be composed and written by the boys with proper forms of address.

4. *Arithmetic*.—L.C.M. by factors. Vulgar fractions. Exercises, both oral and written, on the rules already learnt and having a direct bearing on matters of every day concern.

5. *Geography*.—Map of the district, with simple notes on historical events.

6. *Object lessons*.—As in the scheme prescribed (vide Appendix IV).

7. *\*Drawing*.—As prescribed in Appendix II.

8. *Physical exercises*.—As prescribed in Appendix III.

NOTE.—The teacher will give lessons on Hygiene, teaching the course given in Appendix I of the curriculum at least twice during the school year.

##### Class IV.

1. *Reading*.—To read at sight from the text-books and from other books and to explain words, allusions and sentences. Reading of the script (Urdu only), more particularly *patwaris'* papers (in rural schools) and such documents as *pattas* and *qabuliats*. To recite 100 lines of poetry from the literary reader.

2. *Grammar*.—Parts of speech, syntax and etymology of words.

3. *Writing*.—To write passages to dictation from a book of equal difficulty with the text-books. To compose and write complete letters on ordinary topics with proper forms of address; also brief descriptions of common objects.

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\* This subject is optional.

4. *Arithmetic*.—Simple proportion by unitary method; simple interest; practice; simple lessons in account-keeping (*roznamcha* and *khata*). Simple lessons in compound interest. Urdu and Hindi figures for weights and measures.

5. *Geography*.—Principal features, provinces and the most important towns of India to be taught from the map. United Provinces to be taught in detail.

6. *Object lessons*.—As in the scheme prescribed (vide Appendix IV).

7. \**Drawing*.—As prescribed in Appendix II.

8. *Physical exercises*.—As prescribed in Appendix III.

NOTE.—The teacher will give lessons on Hygiene and Temperance, teaching the course given in Appendix I of the curriculum at least twice during the school year.

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\* This subject is optional.

APPENDIX I.

Outline Syllabus for lessons on Hygiene in Classes III and IV.

Class III.

Lesson 1.

*Cleanliness of the body.*—Necessity of cleanliness for our own sake and for others; danger of uncleanness to cuts and sores; objectionable smell from dirty children; dangers of handling food with dirty hands.

Lesson 2.

Care and appearance of the hair; need for frequent washing—the danger of nits. Care of nails—to be kept short and clean, not to be bitten.

Lesson 3.

Washing and how to wash properly; use of soap; warm water best for cleansing purposes; cold for tonic; face, neck and hands need most washing; whole body should be washed once daily.

Lesson 4.

Need for cleanliness of body inside as well as out; bowels should be moved at least once a day at a regular time, preferably in the morning. Lack of regularity an important reason for constipation. Drink a glass of water before retiring for the night.

Lesson 5.

*Clothing.*—Need for change of clothing once a week; no clothing worn during the day should be worn also at night. Importance of tidiness.

Lesson 6.

*Fresh air and sunlight.*—The value of fresh air and sunlight; necessity of fresh air for lungs. Best air is out of doors.

Lesson 7.

*Breathing.*—Children should be taught how to breathe properly. Deep breathing is best and comes naturally when children run about; breathe through the nose. Nose to be kept clean. How to clean nose? Danger of mouth breathing. Function of nose to warm and filter air.

Lesson 8.

*Sleep. Importance of rest.*—Importance of rest and sleep. Early to bed; how many hours' sleep are the children getting? Should have about 12.

Advantages of well-aired room, open window; important to have through current of air.

*Lesson 9.*

Do children sleep with open windows in winter? Do they have a fire or lamp in the room? Do they cover up their face and head? Say how ventilation should be secured in winter.

*Lesson 10.*

*Care of the teeth.*—The importance of teeth : the more they are used the better for them. How to keep teeth in good condition? A lesson in cleaning the teeth showing how to use the *datoon*.

*Lesson 11.*

Articles useful for cleaning teeth. What do children generally use at home for cleaning their teeth? When to clean teeth (best before going to bed and in the morning)? Injurious effects of pan on teeth. Harmful effects of picking teeth with pins, sticks.

**Class IV.***Lesson 1.*

*Wholesome food and eating habits.*—Adequate nutrition is the best protection against illness and ensures a better and quicker recovery from fatigue. Children should be taught the values of food such as milk, fresh fruits, green vegetables and the bad effects of spices and too many sweets.

*Lesson 2.*

*Evils of intoxicants and drugs.*—What are the chief intoxicants and drugs people use (wine, opium and its various derivatives, hemp, *tari*, *charas*)? Typical appearances of people who are addicted to various forms of intoxicants and drugs. Evil effects of each class of intoxicants and mental, physical and moral deterioration that ensues. Use of intoxicants ruinous to the peace and happiness of the family.

*Lesson 3.*

Meals should be regular in period of time; no food between regular meals, advantageous to drink water when thirsty and between meals, but not much water *during* meals. Never drink with food in mouth; eat slowly, chew food well. Hands and face should be washed before meals.

*Lesson 4.*

Children should not eat dirty food, the remainder of what someone else has partly eaten or share glass or cup with other children; point out the danger of transmission of disease by this. Name diseases, that may be transmitted.

*Lesson 5.*

*Care of the eyes and ears.*—Children should at once tell their teacher if they are unable properly to see words in books or on the blackboard. Need for good light on all work; not to bend over work or read or sew in a bad light.

*Cleaning of the eyes.*—Use of Boric acid.

*Lesson 6.*

Danger of putting any hard substance into ear. How to clean ear of accumulated wax?

*Common infectious diseases.*—Cause, manner of spread and protection against—

*Lesson 7.*

(i) Cholera.

*Lesson 8.*

(ii) Plague.

*Lesson 9.*

(iii) Small-pox.

*Lesson 10.*

(iv) Malaria.

*Lesson 11.*

(v) Hookworm.

*Lesson 12.*

*Domestic Hygiene.*—Proper storage of food and water in the house—manner of contamination of food and pollution of water.

*Lesson 13.*

Cleanliness of towns and village. Importance of proper disposal of refuse and manures and of dejecta in house.

*Books recommended for the use of teachers are :—*

Usul-i-Talim-o-Intizam-i-Madrasa for use of teachers of Vernacular Primary Schools, by Babu Deb Narayan Mukerji and Pandit Durga Prasad Mushran, Allahabad. 1923 edition. Indian Trading Co., Chauk, Allahabad. (10 annas.)

## HYGIENE.

Article on Health, by Major Megaw, I.M.S. (in the *War Journal*), Aiza-o-Sehat-i-Insani in Urdu, or Manushi Angatatha Swastha in Hindi, by K. C. Bhattacharya, published by the Indian Press, Allahabad (12 annas each), or Hifzan-i-Sehat, Parts 1 and 2 in one volume, in Urdu by Munshi Rahmat Elahi Siddiqi, Sub-Assistant Surgeon (corrected edition). Published by the Newal Kishore Press, Lucknow. (Rs. 2.)

Tandurusti ki Pahli Kitab, (Urdu) by Colonel J. W. D. Megaw, Indian Red Cross Society, Viceregal Lodge, Delhi. (12 annas.)

Swastha Raksha ka Prathmic Niyama (the Hindi version of Colonel J. W. D. Megaw's First Laws of Health), Indian Red Cross Society, Viceregal Lodge, Delhi. (12 annas.)

Sehat ke Kahani (Urdu), by E. Marsden, B.A., translated by Munshi Abid Hasan Faridi, published by Macmillan & Co. (Re. 1.)

Hindi translation of the Land of Health and the Land of Wealth, by Pandit Ram Narain Misra, published by Macmillan & Co. (Re. 1.)

Arogya Dig Darshan (Urdu), by Mahatma Mohan Das Karam Chand Gandhi, published by Narayan Dat Sahgul & Sons, Booksellers, Lahore. 1st edition. (12 annas.)

Lower Swasth (Hindi), by Sriyut Bimal, Narvadeshwar Pustakalaya, Babura, Shahabad. 1925 edition. (2 annas.)

Arogya Dig Darshan (Hindi), by Mahatma Mohan Das Karam Chand Gandhi, translated by Bishambhar Sahai Premi, Meerut. (6 annas.)

Hygiene Yani Hifz-i-Sehat, Parts I—IV, by Rai Sahib Dr. Daya Nidhan (1st edition) published by School Book and Apparatus Dépôt, 406, Fatehganj, Lucknow. (Part I, 6 annas; Parts II and III; 7 annas each, Part IV, 8 annas.)

Hygiene ya Swasthya Raksha ki Prarambhik Shiksha, Parts I—IV, by Rai Sahib Dr. Daya Nidhan, (1st edition), published by School Book and Apparatus Dépôt, 406, Fatehganj, Lucknow. (Part I annas 6; Parts II and III 7 annas each; Part IV, 8 annas.)

### TEMPERANCE.

Manual of Temperance (Urdu or Hindi), by Munshi Mewa Ram, B.A., late Inspector of Schools, Jhansi division. (6 annas each.)

Jiwan Path Pradip (moral instructions to the young), compiled by Pandit Ganga Datt Pande, Head Master, Deo-Nagri High School, Meerut.

APPENDIX II.

**Alphabet Charts and Text-books.**

*Alphabet Charts.*

**Infant Class.**

The following charts are approved for use :—

*Urdu :—*

Urdu Chart no. I (illustrated), showing simple letters. (Re. 1-12.) Indian Press, Allahabad.

Urdu Chart (unillustrated), showing simple letters in thick type. (Re. 1.) Gulab Singh & Sons, Lahore.

Urdu Chart no. II (unillustrated), showing simple and compound letters. (Re. 1.) Indian Press, Allahabad.

Urdu Chart no. III (unillustrated), showing combination of vowels. (Re. 1.) Indian Press, Allahabad.

Urdu Chart (illustrated), containing pictures of inanimate objects. (Annas 12.) Indian Press, Allahabad (for Islamia schools).

*Hindi :—*

Hindi Charts nos. I and II (illustrated), showing simple letters. (Rs. 3-8 for both.) Indian Press, Allahabad.

Hindi Alphabet Chart no. I (unillustrated), in bold type, showing simple letters printed in black colour. (Price Re. 1-4.) Newal Kishore Press, Lucknow.

Hindi Chart (unillustrated), showing combination of vowels, printed in red and black colours. (Re. 1-4.) Newal Kishore Press, Lucknow.

Two Hindi Alphabet Charts (unillustrated), showing combination of vowels. (Rs. 2 for both.) Girdhar Lal Pacholi, Shahpara, Aligarh.

Hindi Alphabet Chart (unillustrated), showing combination of consonants in two colours. (Re. 1-4.) Newal Kishore Press, Lucknow.

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**VERNACULAR READERS.**

**Infant Class.**

The primers approved for use as alternative to charts are :—

*Urdu—*

Bachchon ka Bagh, Pahli and Dusri Kiari (revised), published by the Newal Kishore Press, Lucknow. (Pahli Kiari—Uncoloured, 1 anna; coloured, 1 anna 6 pies. Dusri Kiari—Uncoloured, 2 annas; coloured, 2 annas 6 pies).

or

Shanti Press Readers for Infant Classes, A and B, by Rai Sahib Raghunath Das, and Maulvi Mohammad Rafi, published by Rai Sahib Lala Ram Dayal Agarwala, Katra, Allahabad. (1 anna 9 pies each.)

or

Asan Urdu Primers, Parts I and II, by Daya Shankar Dube and Saiyid Zamin Ali, published by the Indian Press, Ltd., Allahabad. (1 anna 6 pies each.)

or

Gulab Reader Series—Infant Readers, Parts I and II, by Maulvi Abdul Wahid, published by Rai Sahib Munshi Gulab Singh and Sons, Lahore. (1 anna 5 pies each.)

or

Bachchon ki Pahli and Dusri Kitab, by Khan Bahadur Maulvi Idris Ahmad, and Adhyapak Ram Ratan, published by the Hindustani Book Dépôt, Lucknow. (Pahli Kitab—Cheaper edition, 1 anna 6 pies. Finish paper, 2 annas 6 pies. Pictures on Art paper, 3 annas. Dusri Kitab—Cheaper edition, 1 anna 6 pies; Superior edition, 2 annas.)

or

Silsila-i-Nisab Hindustani ka Asan Qaida and Asan Kitab, by Khwaja Hamid Ullah Mehr, revised by Mir Mehdi Hasan, published by Mufeez and Sons, Muslim University Press, Aligarh. (1 anna 6 pies each.)

or

Urdu ki Pahli and Dusri Sirhi, by Dr. Ram Prasad Tripathi, and Saiyid Manzur Husain Musavi, published by the Onkar Press, Allahabad. (Pahli Sirhi, 1 anna. Dusri Sirhi, 2 annas.)

*Hindi—*

Bal Bodh, Primers I and II, edited by Daya Shankar Dube, published by the Indian Press, Limited, Allahabad. (1 anna 6 pies each.)

or

Bal Batika Pahli and Dusri Kiari, revised edition, published by the Newal Kishore Press, Lucknow. (Pahli Kiari—uncoloured 1 anna, coloured, 1 anna 6 pies. Dusri Kiari—Uncoloured, 2 annas; coloured, 2 annas 6 pies.)

or

Pahli and Dusri Bal Pothi, by Sahitya Ratna Ayodhya Singh Upadhyaya and Adhyapak Ram Ratan, published by the Hindustani Book Dépôt, Lucknow. (Pahli Pothi—Cheaper edition, 1 anna 6 pies. Finish paper, 2 annas 6 pies. Pictures on art paper, 3 annas. Dusri Pothi—Cheaper edition, 1 anna 6 pies; Superior edition, 2 annas 9 pies.)

or

Bal Shiksha Primer, by Krishna Kanta Malviya, published by Sri Raj Narain Suri, Chowk Ganga Das, Allahabad. (1 anna 6 pies.)

*and*

Bal Shiksha, Part I, by Krishna Kanta Malviya and Maulvi Asghar Husain, "Asghar," published by Sri Raj Narain Suri, Chowk Ganga Das, Allahabad. (1 anna 6 pies.)

*or*

Bachchon ki Primer, Parts I and II, by Sudarshan Acharya, and Shiva Prasad Srivastava, published by the Shishu Press, Allahabad. Part I—2 annas 6 pies. Part II—2 annas.)

*or*

Hindi ki Pahli and Dusri Sirhi, by Dr. Ram Prasad Tripathi, published by the Onkar Press, Allahabad. (Pahli Sirhi 1 anna. Dusri Sirhi 2 annas.)

*or*

Bachchon ki Primer, Parts I and II, by Sudarshan Acharya and Shiva Prasad Srivastava, published by the Shishu Press, Allahabad. (2 annas each.)

*Book recommended for teachers' use :—*

Anupam Niyam, by Suraj Narayan Mathur, Head Master, Government Normal School, Allahabad, published by the Indian Press., Ltd, Allahabad. 1925 edition. (2 annas.)

#### **Class I.**

*Urdu—*

*For Rural Areas.*

Hindustani Zaban ki Pahli Kitab, by Khan Bahadur Idris Ahmad and Adhyapak Ram Ratan, published by the Hindustani Book Dépôt, Lucknow. (Pattern I, coloured plates, 4 annas. Pattern II, cheaper edition, 3 annas 6 pies.)

*or*

Asan Urdu, Part I, by Saiyid Zamin Ali and Daya Shankar Dube, published by the Indian Press, Ltd., Allahabad. (3 annas 6 pies.)

*or*

Hindi Press Series Pahli Kitab, edited by Ramji Lal Sharma and Sri Ram Bajpai, published by the Hindi Press, Allahabad. (3 annas 6 pies.)

*or*

Shanti Press Reader, Part I, by Rai Sahib Raghunath Das and Muhammad Rafi, published by Rai Sahib Lala Ram Dayal Agarwala, Allahabad. (3 annas 6 pies.)

*or*

Onkar Reader, Pahli Kitab, by Saiyid Manzoor Husain and Dr. Ram Prasad Tripathi, published by the Onkar Press, Allahabad. (3 annas.)

*or*

Newal Kishore Press Reader I in Urdu by Prem Chand and Mohammad Askari, B.A., published by Newal Kishore Press, Lucknow. (3 annas.)

*For Urban Areas.*

Hindustani Zaban ki Pahli Kitab, by Khan Bahadur Idris Ahmad and Adhyapak Ram Ratan, published by the Hindustani Book Dépôt, Lucknow. Pattern I coloured plates, 4 annas. Pattern II, cheaper edition, 3 annas 6 pies.)

*or*

Asan Urdu, Part I, by Saiyid Zamin Ali and Daya Shankar Dube, published by the Indian Press, Ltd., Allahabad. (3 annas 6 pies.)

*or*

Hindi Press Series Pahli Kitab, edited by Ramji Lal Sharma and Sri Ram Bajpai, published by the Hindi Press, Allahabad. (3 annas 6 pies.)

*or*

Shanti Press Reader, Part I, by Rai Sahib Raghunath Das and Muhammad Rafi, published by Rai Sahib Lala Ram Dayal Agarwala, Allahabad. (3 annas 6 pies.)

*or*

Onkar Reader, Pahli Kitab, by Saiyid Manzoor Husain and Dr. Ram Prasad Tripathi, published by the Onkar Press, Allahabad. (3 annas.)

*or*

Gulab Reader, Part I, by Abdul Wahid, published by Rai Sahib Munshi Gulab Singh and Sons, Lahore. (5 annas.)

*or*

Newal Kishore Press Reader I in Urdu by Prem Chand and Mohammad Askari, B.A., published by Newal Kishore Press, Lucknow. (3 annas.)

*Hindi—*

*For Rural Areas.*

Hindustani ki Pahli Pothi, by Ajodhya Singh Upadhya and Adhyapak Ram Ratan, published by the Hindustani Book Dépôt, Lucknow. (Pattern I, coloured plates, 4 annas. Pattern II, cheaper edition, 3 annas 6 pies.)

*or*

Bal Bodh Reader, Part I, edited by Daya Shankar Dube, published by the Indian Press, Ltd., Allahabad. (3 annas 6 pies.)

*or*

Hindi Press Series Pahli Kitab, edited by Ramji Lal Sharma and Sri Ram Bajpai, published by the Hindi Press, Allahabad. (3 annas 6 pies.)

*or*

Shanti Press Reader, Part I, by Rai Sahib Raghunath Das, published by Rai Sahib Lala Ram Dayal Agarwala, Allahabad. (3 annas 9 pies.)

*or*

Onkar Reader, Pahli Kitab, by Dr. Ram Prasad Tripathi, published by the Onkar Press, Allahabad. (3 annas.)

*or*

Newal Kishore Press Reader I in Hindi by Prem Chand and Mohammad Askari, B.A., published by Newal Kishore Press, Lucknow. (3 annas.)

*For Urban Areas.*

Hindustani ki Pahli Pothi, by Ajodhya Singh Upadhya and Adhyapak Ram Ratan, published by the Hindustani Book Dépôt, Lucknow. (Pattern I, coloured plates, 4 annas. Pattern II, cheaper edition, 3 annas 6 pies.)

*or*

Bal Bodh Reader, Part I, edited by Daya Shankar Dube, published by the Indian Press, Ltd., Allahabad. (3 annas 6 pies.)

*or*

Hindi Press Series Pahli Kitab, edited by Ramji Lal Sharma and Sri Ram Bajpai, published by the Hindi Press, Allahabad. (3 annas 6 pies.)

*or*

Shanti Press Reader, Part I, by Rai Sahib Raghunath Das, published by Rai Sahib Lala Ram Dayal Agarwala, Allahabad. (3 annas 9 pies.)

*or*

Onkar Reader, Pahli Kitab, by Dr. Ram Prasad Tripathi, published by the Onkar Press, Allahabad. (3 annas.)

or

Gulab Reader, Part I, by Abdul Wahid, published by Rai Sahib Munshi Gulab Singh and Sons, Lahore. (5 annas 4 pies.)

or

Newal Kishore Press Reader I in Hindi by Munshi Prem Chand and Mirza Mohammad Askari, B.A., published by Newal Kishore Press, Lucknow. (3 annas.)

## Class II.

Urdu :—

(For rural areas).

Hindustani Zaban ki Dusri Kitab, by Khan Bahadur Idris Ahmad and Adhyapak Ram Ratan, published by the Hindustani Book Dépôt, Lucknow. (Pattern I coloured plates, 6 annas 6 pies; Pattern II, cheaper edition, 4 annas 9 pies.)

or

Asan Urdu, Part II, by Saiyid Zamin Ali and Daya Shankar Dube, published by the Indian Press, Ltd., Allahabad. (4 annas 6 pies.)

or

Hindi Press Series Dusri Kitab, edited by Ramji Lal Sharma and Sri Ram Bajpai, published by the Hindi Press, Allahabad. (4 annas 6 pies.)

or

Shanti Press Reader, Part II, by Rai Sahib Raghunath Das and Mohammad Rafi, published by Rai Sahib Lala Ram Dayal Agarwala, Allahabad. (5 annas 3 pies.)

or

Onkar Reader, Dusri Kitab, by Saiyid Manzoor Husain and Dr. Ram Prasad Tripathi, published by the Onkar Press, Allahabad. (4 annas.)

or

Newal Kishore Press Reader, Part II, in Urdu by Prem Chand and Mohammad Askari, B.A., published by Newal Kishore Press, Lucknow. (4 annas 6 pies.)

(For urban areas).

Hindustani Zaban ki Dusri Kitab, by Khan Bahadur Idris Ahmad and Adhyapak Ram Ratan, published by the Hindustani Book Dépôt, Lucknow. (Pattern I coloured plates, 6 annas 6 pies; Pattern II, cheaper edition, 4 annas 9 pies.)

or

Asan Urdu, Part II, by Saiyid Zamin Ali and Daya Shankar Dube, published by the Indian Press, Ltd., Allahabad. (4 annas 6 pies.)

or

Hindi Press Series Dusri Kitab, edited by Ramji Lal Sharma and Sri Ram Bajpai, published by the Hindi Press, Allahabad. (4 annas 6 pies.)

or

Shanti Press Reader, Part II, by Rai Sahib Raghunath Das and Mohammad Rafi, published by Rai Sahib Lala Ram Dayal Agarwala, Allahabad. (5 annas 3 pies.)

or

Onkar Reader, Dusri Kitab, by Saiyid Manzoor Husain and Dr. Ram Prasad Tripathi, published by the Onkar Press, Allahabad. (4 annas).

or

Gulab Reader, Part I, by Abdul Wahid, published by Rai Sahib Munshi Gulab Singh and Sons, Lahore. (5 annas 2 pies.)

or

Newal Kishore Press Reader II in Urdu by Prem Chand and Mohammad Askari, B.A., published by Newal Kishore Press, Lucknow. (4 annas 6 pies.)

(For rural areas).

*Hindi:—*

Hindustani ki Dusri Pothi, by Ajodhya Singh Upadhyaya and Adyapak Ram Ratan, published by the Hindustani Book Dépôt, Lucknow. Pattern I coloured pates, 6 annas 6 pies; Pattern II cheaper edition, 4 annas 9 pies.)

or

Bal Bodh Reader, Part II, edited by Daya Shankar Dube, published by the Indian Press, Ltd., Allahabad. (4 annas 6 pies.)

or

Hindi Press Series Dusri Kitab, edited by Ramji Lal Sharma and Sri Ram Bajpai, published by the Hindi Press, Allahabad. (4 annas 6 pies.)

or

Shanti Press Reader, Part II, by Rai Sahib Raghunath Das, published by Rai Sahib Lala Ram Dayal Agarwala, Allahabad. (5 annas 3 pies.)

or

Onkar Reader, Dusri Kitab, by Dr. Ram Prasad Tripathi, published by the Onkar Press, Allahabad. (4 annas.)

or

Newal Kishore Press Reader II in Hindi by Prem Chand and Mohammad Askari, B.A., published by Newal Kishore Press, Lucknow. (4 annas 6 pies.)

(For urban areas.)

Hindustani ki Dusri Pothi, by Ajodhya Singh Upadhya and Adhyapak Ram Ratan, published by the Hindustani Book Dépôt, Lucknow. (Pattern I coloured plates, 6 annas 6 pies; Pattern II cheaper edition, 4 annas 9 pies.)

or

Bal Bodh Reader, Part II, edited by Daya Shankar Dube, published by the Indian Press, Ltd., Allahabad. (4 annas 6 pies.)

or

Hindi Press Series Dusri Kitab, edited by Ramji Lal Sharma and Sri Ram Bajpai, published by the Hindi Press, Allahabad. (4 annas 6 pies.)

or

Shanti Press Reader, Part II, by Rai Sahib Raghunath Das, published by Rai Sahib Lala Ram Dayal Agarwal, Allahabad. (5 annas 3 pies.)

or

Onkar Reader, Dusri Kitab, by Dr. Ram Prasad Tripathi, published by the Onkar Press, Allahabad. (4 annas.)

or

Gulab Reader, Part II, by Abdul Wahid, published by Rai Sahib Munshi Gulab Singh and Sons, Lahore. (5 annas 9 pies.)

or

Newal Kishore Press Reader II in Hindi by Prem Chand and Mohammad Askari, B.A., published by Newal Kishore Press, Lucknow. (5 annas.)

Class III.

\*Urdu.

*Common language reader.*

*(For rural areas.)*

Hindustani Zaban ki Tisri Kitab, by Khan Bahadur Idris Ahmad and Adhyapak Ram Ratan, published by the Hindustani Book Dépôt, Lucknow. (Pattern I coloured plates, 7 annas 9 pies; Pattern II cheaper edition, 6 annas 3 pies.)

or

Asan Urdu, Part III, by Saiyid Zamin Ali and Daya Shankar Dube, published by the Indian Press, Ltd., Allahabad. (6 annas.)

or

Hindi Press Series Tisri Kitab, edited by Ramji Lal Sharma and Sri Ram Bajpai, published by the Hindi Press, Allahabad (5 annas 3 pies.)

or

Shanti Press Reader, Part III, by Rai Sahib Raghunath Das and Mohammad Rafi, published by Rai Sahib Lala Ram Dayal Agarwala, Allahabad. (7 annas.)

or

Onkar Reader, Tisri Kitab, by Saiyid Manzoor Husain and Dr. Ram Prasad Tripathi, published by the Onkar Press, Allahabad. (5 annas.)

*Literary reader.*

Macmillan's New Urdu Literary Reader for Classes III and IV, by M. Saiyid Ishaq Ali, published by Macmillan and Co. (5 annas.)

or

and

Tanwir-i-Urdu, by Maulvi M. G. Zubaid Ahmad, Indian Publishing House, Allahabad, 1927 edition. (4 annas.)

or

Shigoofa-i-Adab, by Hamid Ullah Afsar, published by the Indian Press, Limited, Allahabad. 1927 edition. (6 annas.)

\* The literary readers prescribed for use in Classes III and IV should not be commenced until the scholar has made sufficient progress in the common language to enable him to study the literary reader with advantage.

or

Newal Kishore Press Reader III in Urdu by Prem Chand and Mohammad Askari, B.A., published by Newal Kishore Press, Lucknow, (7 annas.)

(For urban areas).

Hindustani Zaban ki Tisri Kitab, by Khan Bahadur Idris Ahmad and Adhyapak Ram Ratan, published by the Hindustani Book Dépôt, Lucknow. (Pattern I coloured plates, 7 annas 9 pies; Pattern II cheaper edition, 6 annas 3 pies.)

or

Asan Urdu, Part III, by Saiyid Zamin Ali and Daya Shankar Dube, published by the Indian Press, Ltd., Allahabad. (6 annas.)

or

Hindi Press Series Tisri Kitab, edited by Ramji Lal Sharma and Sri Ram Bajpai, published by the Hindi Press, Allahabad. (5 annas 3 pies.)

or

Shanti Press Reader, Part III, by Rai Sahib Raghunath Das and Mohammad Rafi, published by Rai Sahib Lala Ram Dayal Agarwala, Allahabad. (7 annas.)

or

Gauhar-i-Urdu by Abid Hasan Faridi, published by University Publishing House, Agra, (5 annas.)

and

or

Ghuncha-i-Adab, 1930 edition, compiled by Naimur-Rahman, published by the Indian Press, Ltd., Allahabad. (6 annas.)

or

Onkar Reader, Tisri Kitab,  
by Saiyid Manzoor  
Husain and Dr. Ram  
Prasad Tripathi, pub-  
lished by the Onkar Press,  
Allahabad. (5 annas.)

or

Gulab Reader, Part III, by  
Abdul Wahid, published  
by Rai Sahib, Munshi  
Gulab Singh and Sons,  
Lahore. (6 annas 2 pies.)

or

Newal Kishore Press Reader  
III in Urdu by Prem  
Chandra and Mohammad  
Askari, B.A., published by  
Newal Kishore Press,  
Lucknow, (7 annas.)

\*Hindi.

*Common language reader.*  
(For rural areas.)

Hindustani ki Tisri Pothi,  
by Ajodhya Singh Upadhy-  
ya and Adhyapak Ram  
Ratan, published by the  
Hindustani Book Dépôt,  
Lucknow. (Pattern I  
coloured plates, 7 annas  
9 pies; Pattern II cheaper  
edition, 6 annas 3 pies.)

or

Bal Bodh Reader, Part III,  
edited by Daya Shankar  
Dube, published by the  
Indian Press, Ltd., Al-  
lahabad. (6 annas.)

or

Chaman-i-Urdu, compiled  
by Saiyid Zafar Husain,  
published by Lala Ram  
Narain Lal, Katra, Allah-  
abad. (6 annas.)

or

and

Sitar-i-Urdu (revised) by Ifti-  
khar Husain Zuberi and re-  
vised by Itrat Husain Zub-  
eri, published by Kedar Nath  
and Sons, Meerut, (annas 5).

or

Bahar-i-Adab by Muhammad  
Husain Khan, published by  
G. R. Bhargava and Sons,  
Chandausi, (annas 5).

*Literary reader.*

Hindi Praveshika, published  
by P. C. Dwadesh Shreni  
and Co., Aligarh. (4  
annas.)

and

\* The literary readers prescribed for use in Classes III and IV should not be commenced until the scholar has made sufficient progress in the common language to enable him to study the literary reader with advantage.

or

Hindi Press Series Tisri Kitab, edited by Ramji Lal Sharma and Sri Ram Bajpai, published by the Hindi Press, Allahabad. (5 annas 3 pies.)

or

Shanti Press Reader, Part III, by Rai Sahib Raghunath Das, published by Rai Sahib Lala Ram Dayal Agarwala, Allahabad. (6 annas 9 pies.)

or

Newal Kishore Press Reader III in Hindi by Prem Chand and Mohammad Askari, B.A., published by Newal Kishore Press, Lucknow, (annas 7).

or

and

Onkar Reader, Tisri Kitab, by Dr. Ram Prasad Tripathi, published by the Onkar Press, Allahabad. (5 annas.)

(For urban areas).

Hindustani ki Tisri Pothi, by Ajodhya Singh Upadhyaya and Adyapak Ram Ratan, published by the Hindustani Book Dépôt, Lucknow. (Pattern I coloured plates, 7 annas 9 pies; Pattern II cheaper edition, 6 annas 3 pies.)

or

Bal Bodh Reader, Part III, edited by Daya Shankar Dube, published by the Indian Press, Ltd., Allahabad. (6 annas.)

or

Hindi Shiksha, Part I, edited by Padma Singh Sharma, published by the Hindi Press, Allahabad. (6 annas.)

or

Bhasha Pravesha, Part I, revised 1930 edition, by Rai Sahib Sukhdeo Tewari, published by the Indian Press, Limited, Allahabad. (6 annas.)

or

Hindi Press Series Tisri Kitab, edited by Ramji Lal Sharma and Sri Ram Bajpai, published by the Hindi Press, Allahabad. (5 annas 3 pies.)

or

Shanti Press Reader, Part III, by Rai Sahib Raghunath Das, published by Rai Sahib Lala Ram Dayal Agarwala, Allahabad. (6 annas 9 pies.)

or

Onkar Reader, Tisri Kitab, by Dr. Ram Prasad Tripathi, published by the Onkar Press, Allahabad. (5 annas.)

or

Gulab Reader, Part III, by Abdul Wahid, published by Rai Sahib Munshi Gulab Singh and Sons, Lahore. (6 annas 4 pies.)

or

Newal Kishore Press Reader III in Hindi by Prem Chand and Mohammad Askari B.A., published by Newal Kishore Press, Lucknow, (annas 7.).

or

Sahitya Manjari, 1930 edition, edited by Rama Shankar Shukla 'Rasal', published by Lala Ram Narain Lal, Katra, Allahabad. (6 annas.)

or

Sahitya Shiksha, Part I, edited by Professor Daya Shankar Dube and Ganga Narain Dwivedi, published by Shri Raj Narain Suri, Chowk Ganga Das, Allahabad. (6 annas.)

and

or

Nutan Hindi Pathawali, Part I, 1930 edition, edited by Jaidev Singh, Krishna Vinayak Phadke and Lakshmi Kant Tripathi, published by the City Book House, Cawnpore. (8 annas.)

or

Sahitya Pravesh (Revised edition of Sahitya Manjari), by Adhyapak Ram Ratan and Chandra Hans Sharma, Visharad, published by Ratan Ashram, Agra. (5 annas.)

or

Sahitya Prasoon, Part I, by Mahendra, published by University Book Dépôt, Agra, (annas 5.)

Class IV.

\*Urdu.

*Common language reader.*  
(For rural areas.)

Hindustani Zaban ki Chau-  
thi Kitab, by Khan Ba-  
hadur Idris Ahmad and  
Adhyapak Ram Ratan,  
published by the Hindus-  
tani Book Dépôt, Luck-  
now. (Pattern I—Coloured  
plates, 8 annas 6 pies;  
Pattern II—Cheaper  
edition, 6 annas 3 pies.)

or

Asan Urdu, Part IV, by  
Saiyid Zamin Ali and  
Daya Shankar Dube, pub-  
lished by the Indian  
Press, Ltd., Allahabad.  
(6 annas.)

or

Hindi Press Series, Chau-  
thi Kitab, edited by Ramji  
Lal Sharma and Sri Ram  
Bajpai, published by the  
Hindi Press, Allahabad.  
(5 annas 3 pies.)

or

Shanti Press Reader, Part  
IV, by Rai Sahib Raghu-  
nath Das and Mohammad  
Rafi, published by Rai  
Sahib Lala Ram Dayal  
Agarwala, Allahabad. (7  
annas.)

*Literary reader.*

Macmillan's New Urdu Li-  
terary Reader for Classes  
III and IV, by M. Saiyid  
Ishaq Ali, published by  
Macmillan and Co. (5  
annas.)

and

or

Tanwir-i-Urdu, by Maulvi  
M. G. Zubaid Ahmad,  
published by Indian Pub-  
lishing House, Allahabad,  
1927 edition. (4 annas.)

or

Shigoofa-i-Adab by Hamid  
Ullah Afsar, published by  
the Indian Press, Limited,  
Allahabad. 1927 edition.  
(6 annas.)

\* The literary readers prescribed for use in Classes III and IV should not be commenced until the scholar has made sufficient progress in the common language to enable him to study the literary reader with advantage.

or

Onkar Reader, Chauthi Kitab, by Saiyid Manzoor Husain and Dr. Ram Prasad Tripathi, published by the Onkar Press, Allahabad. (5 annas.)

or

Newal Kishore Press, Reader IV in Urdu by Prem Chand and Mohammad Askari, B.A., published by Newal Kishore Press, Lucknow, (annas 7.)

(For urban areas.)

Hindustani Zaban ki Chauthi Kitab, by Khan Bahadur Idris Ahmad and Adhyapak Ram Ratan, published by Hindustani Book Dépôt, Lucknow. (Pattern I—Coloured plates, 8 annas 6 pies; Pattern II—Cheaper edition, 6 annas 3 pies.)

or

Asan Urdu, Part IV, by Saiyid Zamin Ali and Daya Shankar Dube, published by the Indian Press, Ltd., Allahabad. (6 annas.)

or

Hindi Press Series Chauthi Kitab, edited by Ramji Lal Sharma and Sri Ram Bajpai, published by the Hindi Press, Allahabad. (5 annas 3 pies.)

or

Gauhar-i-Urdu by Abid Hasan Faridi, published by University Publishing House, Agra. (5 annas.)

and

or

Ghuncha-i-Adab, 1930 edition, compiled by Naimur-Rahman, published by the Indian Press, Ltd., Allahabad. (6 annas.)

*or*  
Shanti Press Reader, Part IV, by Rai Sahib Raghu-nath Das and Mohammad Rafi, published by Rai Sahib Lala Ram Dayal Agarwala, Allahabad. (7 annas.)

*or*  
Onkar Reader, Chauthi Kitab, by Saiyid Manzoor Husain and Dr. Ram Prasad Tripathi, published by the Onkar Press, Allahabad. (5 annas.)

*or*  
Gulab Reader, Part IV, by Abdul Wahid, published by Rai Sahib Munshi Gulab Singh and Sons, Lahore. (7 annas.)

*or*  
Newal Kishore Press, Reader IV in Urdu by Prem Chand and Mohammad Askari, B.A., published by Newal Kishore Press, Lucknow, (7 annas.)

*or*  
Chaman-i-Urdu, compiled by Saiyid Zafar Husain, published by Lala Ram Narain Lal, Katra, Allahabad. (6 annas.)

*or*  
Sitar-i-Urdu (revised) by Iftikhar Husain Zuberi and revised by Itrat Husain Zuberi, published by Kedar Nath and Sons, Meerut, (5 annas.)

*or*  
Bahar-i-Adab by Muhammad Husain Khan, published by G. R. Bhargava and Sons, Chandausi. (5 annas.)

*\*Hindī.*

*Common language reader.*  
(For rural areas.)

Hindustani ki Chauthi Pothi, by Ajodhya Singh Upadhya and Adhyapak Ram Ratan, published by the Hindustani Book Dépôt, Lucknow. (Pattern I—Coloured plates, 8 annas 6 pies; Pattern II—Cheaper edition, 6 annas 3 pies.)

*Literary reader.*

Hindi Praveshika, published by P. C. Dwadesh Shreni and Co., Aligarh. (4 annas.)

*or*  
Hindī Shiksha, Part I, edited by Padma Singh Sharma, published by the Hindi Press, Allahabad. (6 annas.)

\*The literary readers prescribed for use in classes III and IV should not be commenced until the scholar has made sufficient progress in the common language to enable him to study the literary reader with advantage.

or

Bal Bōdh Reader, Part IV, edited by Daya Shankar Dube, published by the Indian Press, Ltd., Allahabad. (6 annas.)

or

Hindi Press Series, Chauthi Kitab, edited by Ramji Lal Sharma and Sri Ram Bajpai, published by the Hindi Press, Allahabad. (5 annas 3 pies.)

or

Shanti Press Reader, Part IV, by Rai Sahib Raghnath Das, published by Rai Sahib Lala Ram Dayal Agarwala, Allahabad. (7 annas.)

or

Onkar Reader, Chauthi Kitab, by Dr. Ram Prasad Tripathi, published by the Onkar Press, Allahabad. (5 annas.)

or

Newal Kishore Press Reader IV in Hindi by Prem Chand and Mohammad Askari B.A., published by Newal Kishore Press, Lucknow, (annas 7.)

(For urban areas.)

Hindustani ki Chauthi Pothi, by Ajodhya Singh Upadhyaya and Adhyapak Ram Ratan, published by the Hindustani Book Dépôt, Lucknow. (Pattern I—Coloured plates, 8 annas 6 pies; Pattern II—Cheaper edition, 6 annas 3 pies.)

or

Bhasha Pravesha, Part I, revised 1930 edition, by Rai Sahib Sukhdeo Tewari, published by the Indian Press, Limited, Allahabad. (6 annas.)

or

Sahitya Manjari, 1930 edition, edited by Rama Shankar Shukla 'Rasal', published by Lala Ram Narain Lal, Katra, Allahabad. (6 annas.)

and

or

Bal Bodh Reader, Part IV,  
edited by Daya Shankar  
Dube, published by the  
Indian Press, Ltd., Al-  
lahabad. (6 annas.)

or

Hindi Press Series, Chauthi  
Kitab, edited by Ramji  
Lal Sharma and Sri Ram  
Bajpai, published by the  
Hindi Press, Allahabad.  
(5 annas 3 pies.)

or

Shanti Press Reader, Part  
IV, by Rai Sahib Raghu-  
nath Das, published by  
Rai Sahib Lala Ram  
Dayal Agarwala, Allah-  
abad. (7 annas.)

or

Onkar Reader, Chauthi Kitab,  
by Dr. Ram Prasad  
Tripathi, published by  
the Onkar Press, Allah-  
abad. (5 annas.)

or

Gulab Reader, Part IV, by  
Abdul Wahid, published  
by Rai Sahib Munshi  
Gulab Singh and Sons,  
Lahore. (6 annas 1 pie.)

or

Newal Kishore Press Reader  
IV in Hindi by Prem  
Chand and Mohammad  
Askari B.A., published by  
Newal Kishore Press,  
Lucknow, (annas 7.)

or

Sahitya Shiksha, Part I,  
edited by Professor Daya  
Shankar Dube and Ganga  
Narain Dwivedi, pub-  
lished by Shri Raj Narain  
Suri, Chowk Ganga Das,  
Allahabad. (6 annas.)

or

Nutan Hindi Pathawali,  
Part I, 1930 edition,  
edited by Jaidev Singh,  
Krishna Vinayak Phadke  
and Lakshmi Kant Tri-  
pathi, published by the  
City Book House, Cawn-  
pore. (8 annas.)

or

Sahitya Pravesh (Revised  
edition of Sahitya Manjari),  
by Adhyapak Ram Ratan  
and Chandra Hans Shar-  
ma, Visharad, published  
by Ratan Ashram, Agra.  
(5 annas.)

or

Sahitya Prasoon, Part I, by  
Mahendra, published by  
University Book Dépôt,  
Agra, (annas 5.)

and

*Books recommended for teachers' use :—*

Bal Patra Bodh by Badri Nath Bhatt, published by Ram Prasad and Brothers, Agra, 1926 edition. (2 annas.)

Mazmun Navisi ki Nai Kitab, Part I, by Bihari Lal and Lachhman Das, published by Rai Sahib M. Gulab Singh and Sons, Lahore, 1925 edition. (3 annas.)

Fitrat-i-Atfal, translated by Maulvi Hamid Hasan of Cawnpore, published by the All-India Muslim Educational Committee, Aligarh. (4 annas.)

Abadul Mazamin, Part I, by Maulvi Ahmad, published by Anwar Ahmadi Press, Allahabad, 1st edition. (Re. 1.)

Hindi composition by Ganga Prasad, Head Master, D.A.-V. High School, Allahabad, published by Rai Sahib Ram Dayal Agarwala, Allahabad. (12 annas.)

Anuvad aur Vyakhaya, by Ram Ratna, published by Ratna Ashram, Agra. (8 annas.)

Hindi Rachna Probodh, by Ram Ratna. (Re. 1.)

Hindi Sahitya Suman, Part II, by Hira Lal Sharma, published by D. J. Book Dépôt, Jodhpur. (10 annas.)

Saral Rachna Pranali, by Nisar Ahmad and Jotish Chandra, first edition, 1928, published by Anwar Ahmadi Press, 231, Shahganj, Allahabad. (Re. 1.)

Tehsilul Talim, Part I, by Saiyid Asghar Ali and Talib Ali Paband Qureshi, published by Talib Ali Paband Qureshi, Proprietor, Akbar-i-Talim, Lahore. (6 annas.)

Farhang-i-Amsal, by Saiyid Masood Hasan Rizvi, Adeeb (1929 edition), published by R. S. Ram Dayal Agarwal Allahabad. (10 annas.)

Anokhi Duniya, Part II, by Munshi Lal Agarwala, published by Macmillan & Co., Calcutta. (10 annas.)

Bal Bodh Vyakaran, by Pandit Bamdeo Sharma, published by Ram Narain Lal, Katra, Allahabad. (3 annas.)

Prabandh-aur-Patra, Part I, by Anandi Prasad Srivastava, published by Bhargava Book Agency, Allahabad. (4 annas.)

Hindi Rachna-ki-Kunji, by Vishnu Datt Bajpai, published by Vishnu Datta Bajpai, Assistant teacher, D. A.-V. High School, Allahabad. (4 annas.)

The following dictionaries are recommended for use of teachers and boys :—

Shabdarth Paryat Kosh, published by Ram Narain Lal, Allahabad. (Rs. 3.)

Gutka Hindi Kosh, published by Ram Narain Lal, Allahabad (Re. 1-8.)

Hindi Shabḍa Kalpadrum, published by Rai Sahib Ram Dayal Agarwala, Allahabad. (Rs. 3.)

### SCRIPT READERS.

#### Classes III and IV.

Urdu :—

Insha-i-Khatt-i-Shikasht, by Abul Hasan, published by Khazan Singh Sharma, Bookseller, Sipat Bazar, Meerut. (3 annas.)

or

Muktubat-i-Khatt-i-Shikasht, by Saiyid Basharat Ali, Andarkote, Meerut City. (3 annas.)

or

Risala-i-Khatt-i-Shikasht, by Qazi Muhammad Bashir-ud-din Siddiqi, late Arabic Teacher, Government High School, Meerut, published by Mujtabai Press, Meerut. (3 annas.)

Insha-i-Jadid, by Ghasi Ram, published by the Vidya Printing Press, Meerut. (3 annas.)

or

Urdu Script Letter Writer, Part I, by Saiyid Abdul Wasay Jafri (1st edition, 1924), published by Jafri Brothers, 231 Shahganj, Allahabad. (3 annas.)

or

Anwar-i-Khatt Shikasht, by Nand Kishore and Adhyapak Murari Lal Sharma, published by Ratna Ashram, Agra. (3 annas.)

Note.—There is no script reading in Hindi required by the curriculum.

### RECITATION.

#### Classes I and II.

Urdu :—

Nazm ke Phool in Urdu (Recitation) for Classes I and II of Vernacular Schools, by Saiyid Basharat Ali, Andarkote, Meerut City. (9 pies.)

or

Nazm ke Moti, by Maulvi Muhammad Iftikhar Hasan Zuberi, 685, Khairnagar, Meerut. (9 pies.)

or

Risala-i-Nazm-i-Dilchasp, Part I, for Classes I and II of Vernacular Schools, by Saiyid Abdul Wasi Jafri, published by the Anwar Ahmadi Press, Allahabad. (1 anna.)

or

Guldasta, Part I, compiled by Muhammad Rafiq, published by Kanta Prasad Agarwala, Bookseller and Publisher, Chowk, Allahabad. (1 anna 6 pies.)

or

Guldasta-i-Atfal, Part I, compiled by Khuda Bakhsh, published by Lala Ram Narain Lal, Katra, Allahabad. (1 anna.)

or

Hindustani Naghme, by K. B. Mohammad Idris Ahmad, published by Hindustani Book Dépôt, Lucknow. (1 anna.)

or

Chaman-i-Nazm, by Abdul Hasan Haidri, published by Bhargava Book Agency, Allahabad. (1 anna 6 pies.)

*Hindi :—*

Hindi Padyamala for Classes I and II, by Pandit Ramji Lal Sharma, Hindi Press, Allahabad. (1 anna.)

or

Bal Kabitawali, revised edition, by Sri Narain Chaturvedi, M.A., published by School Book and Apparatus Dépôt, 406, Fatehganj, Lucknow. (1 anna 6 pies.)

or

Navina Padyavali, Part I, for Classes I and II of Vernacular Schools, by Iftikhar Hasan, Khairnagar, Meerut. (Coloured ink, 1 anna 3 pies; black ink, 1 anna.)

or

Saral Kavita Mala (in Hindi), published by Indian Press, Ltd., Allahabad. (1929 edition.) (1 anna.)

or

Praveshika Padyawali, Part II, by Ram Shankar Shukla, published by the Bhargava Book Agency, Allahabad. (1 anna 6 pies.)

or

Vinod, by Mannan Dwivedi Gajpuri, published by Lala Ram Narain Lal Publisher, Allahabad. (1 anna 6 pies.)

or

Achche Git, for classes I and II, by Pandit Ajothya Singh Upadhyaya, Professor, Benares, Hindu University. (1 anna.)

*Patriotic Poems.*

The following books containing patriotic poems are recommended for class use in schools :—

**Classes I to IV.**

*Hindi :—*

1. Swadesh Gan, Parts I and II (on cream wove), for Classes I, II, III and IV of Vernacular Schools, respectively, published by the Bhargava School Book Dépôt, Lucknow. (6 pies each.)
2. Swadesh Gan, Parts I and II (on white printing), for Classes I, II, III and IV of Vernacular Schools, respectively, published by the Bhargava School Book Dépôt, Lucknow. (5 pies each.)
3. Bharat Gan, Parts I and II (coloured cover without illustrations, for Classes I, II, III and IV of Vernacular Schools, respectively, published by the Standard Press, Allahabad. (9 pies each.)
4. Swadesh Sangit, Part I and II (with cover on art paper with notes and illustrations), for Classes I and II III and and IV of Vernacular Schools, respectively, published by the Indian Press, Allahabad (Part I, 1 anna 3 pies; Part II, 1 anna 6 pies.)
5. Swadesh Sangit, Parts I and II (with 60 lb. cover and without illustrations and notes), for Classes I and II and III and IV of Vernacular Schools, respectively, published by the Indian Press, Allahabad. (9 pies each.)
6. Swadesh Prem, Parts I and II (illustrated)), for Classes I and II and III and IV of Vernacular Schools, respectively, published by Rai Sahib Lala Ram Dayal Agarwala, Allahabad. (9 pies each.)
7. Swadesh Prem, Parts I and II (unillustrated), for Classes I, and II and III and IV of Vernacular Schools, respectively published by Rai Sahib Lala Ram Dayal Agarwala, Allahabad. (6 pies each.)
8. Hindustani Bachchon ke Gane, Parts I and II (with illustrations on ivory finish paper and cover in one colour), for Classes I and II and III and IV of Vernacular Schools, respectively, published by the Hindustani Book Dépôt, Lucknow. (Part I, 9 pies; Part II, 1 anna.)
9. Hindustani Bachchon ke Gane, Parts I and II (with illustrations on art paper and coloured border on each page and two-coloured title), for Classes I and II and III and IV of Vernacular Schools, respectively, published by the Hindustani Book Dépôt, Lucknow. (Part I, 1 anna; Part II, 1 anna 3 pies.)
10. Desh ke Git, Parts I and II, for Classes I and II and III and IV of Vernacular Schools, respectively, published by the Shishu Press, Allahabad. (Parts I and II, 6 pies each.)
11. Swadeshi Gan, Parts I and II, for Classes I and II and III and IV of Vernacular Schools, respectively, published by the Saraswati Publishing House, Agra. (Part I, 9 pies; Part II, 1 anna.)

12. Swadesh Gitawali, Parts I and II, for Classes I and II and III and IV of Vernacular Schools, published by the Newal Kishore Press, Lucknow. (Part I, 9 pies; Part II, 1 anna.)

13. Hindustani Git, Parts I and II, for Classes I and II and III and IV of Vernacular Schools, respectively, published by the School Book and Apparatus Dépôt, Lucknow. (Part I, 6 pies; Part II, 9 pies.)

14. Patriotic Poems in Hindi, Parts I and II, for Classes I and II and III and IV of Vernacular Schools, respectively, published by P. C. Dwadesh Shreni & Co., Aligarh. (Part I, 3 pies; Part II, 4 pies.)

15. Desh Bandana, Parts I and II, for Classes I and II and III and IV of Vernacular Schools, respectively, published by Agarwal Brothers & Co., Allahabad (Parts I and II, 4½ pies each.)

16. Rashtri Gan, Parts I and II (cheap edition, for Classes I and II and III and IV of Vernacular Schools, respectively, published by Gautama Brothers & Co., Cawnpore. (Part I, 6 pies; Part II, 9 pies.)

17. Rashtri Gan, Parts I and II (picture edition), for Classes I and II and III and IV of Vernacular Schools, respectively, published by Gautama Brothers & Co., Cawnpore. (Part I, 9 pies; Part II, 1 anna.)

*Urdu :—*

1. Watan ki Yad, Parts I and II, for Classes I and II and III and IV of Vernacular Schools, respectively, published by the Newal Kishore Press, Lucknow. (Part I, 9 pies; Part II, 1 anna.)

2. Patriotic Poems, Parts I and II, for Classes I and II and III and IV of Vernacular Schools, respectively, published by Lala Ram Narain Lal, Allahabad. (Part I, 6 pies; Part II, 9 pies.)

3. Watan ke Rag, Parts I and II (illustrated), for Classes I and II and III and IV of Vernacular Schools, respectively, published by the Indian Press, Allahabad. (Part I, 1 anna 3 pies; Part II, 1 anna 6 pies.)

4. Watan ke Rag, Parts I and II (unillustrated), for Classes I and II and III and IV of Vernacular Schools, respectively, published by the Indian Press, Allahabad. (Parts I and II, 9 pies each.)

5. Watan ke Git, Parts I and II, for Classes I and II and III and IV of Vernacular Schools, respectively, published by the Saraswati Publishing House, Agra. (Part I and II, 9 pies each.)

6. Tarana-i-Watan, Parts I and II (coloured cover without illustrations), for Classes I and II and III and IV of Vernacular Schools, respectively, published by the Standard Press, Allahabad. (Part I, 6 pies; Part II, 9 pies.)

7. Patriotic Poems in Urdu, Parts I and II, for Classes I and II and III and IV of Vernacular Schools, respectively, published by P. C. Dwadesh Shreni & Co., Aligarh. (Part I, 4 pies; Part II, 5 pies.)

8. Hubb-i-Watan in Urdu, Parts I and II (illustrated), for Classes I and II and III and IV of Vernacular Schools, respectively, published by Rai Sahib Lala Ram Dayal Agarwala, Allahabad. (9 pies each.)

9. Hubb-i-Watan in Urdu, Parts I and II (unillustrated), for Classes I and II and III and IV of Vernacular Schools, respectively, published by Rai Sahib Lala Ram Dayal Agarwala, Allahabad. (6 pies each.)

10. Watan ke Git, Parts I and II, for Classes I and II and III and IV of Vernacular Schools, respectively, published by the Shishu Press, Allahabad. (Parts I and II, 6 pies each.)

11. Sarod-i-Watan, Parts I and II (cheap edition), for Classes I and II and III and IV of Vernacular Schools, respectively, published by Gautama Brothers & Co., Cawnpore. (Part I, 6 pies; Part II, 9 pies.)

12. Sarod-i-Watan, Parts I and II (picture edition), for Classes I, and II and III and IV of Vernacular Schools, respectively, published by Gatama Brothers & Co., Cawnpore. (Part I, 9 pies; Part II, 1 anna.)

13. Watan ka Tarana, Parts I and II, for Classes I and II and III and IV of Vernacular Schools, respectively, published by Bhargava Book Agency, Allahabad. (Parts I and II, 6 pies each.)

### COPY-SLIPS.

#### Class I.

#### Urdu :—

Copy-slip no. I, published by the Indian Press, Allahabad. (1 anna 3 pies.)

or

Urdu Model Copy-slip no. I, School Book and Apparatus Dépôt, 406, Fatehganj, Lucknow, 2nd edition. (1 anna.)

or

Urdu Copy-slip, Part I, published by Ram Narain Lal, Katra, Allahabad. (1 anna.)

or

Muallim Khush Navisi, Slip no. 3, by Sita Ram and Abul Hasan Haidri, published by Bhargava Book Agency, Johnstonganj, Allahabad. (1 anna.)

#### Hindi :—

Hindi Lipi Bodh, no. I, revised edition of 1923, published by the Indian Press, Allahabad. (1 anna 3 pies.)

or

Copy-slip no. I, by Kamta Prasad, published by Raghunath Prasad and Sons, Cawnpore. (1 anna 3 pies.)

or

Hindi Model Copy-slip no. I, School Book and Apparatus Dépôt, 406, Fatehganj, Lucknow, 1925 edition. (1 anna.)

or

Model Copy-slip no. I(A), in Hindi, School Book and Apparatus Dépôt, 406, Fatehganj. Lucknow, 1925 edition. (1 anna.)

or

Lipi Bodh Hindi Copy-slip no. 1, by C. L. Malviyaya (1st edition), published by Bhargava Book Dépôt, 15-16, Aminabad Park, Lucknow. (1 anna 3 pies.)

### Classes II and III.

#### Urdu :—

Copy-slip no. II, published by the Indian Press, Allahabad. (1 anna 3 pies.)

or

Urdu Model Copy-slips, nos. II and III, School Book and Apparatus Dépôt, 406, Fatehganj, Lucknow, 2nd edition. (1 anna and 1 anna 3 pies.)

or

Urdu Copy-slips, Parts II and III, published by Ram Narain Lal, Katra, Allahabad. (1 anna each.)

or

Copy-slip, no. 3 (Urdu), for Class III, published by Indian Press, Ltd., Allahabad. (1 anna 3 pies.)

or

Muallim Khush Navisi, slips nos. 4, 4A, 5, 5A, by Sita Ram and Abul Hasan Haidri, published by Bhargava Book Agency, Johnstonganj, Allahabad. (Numbers 4, 4A, 5 and 5A, 9 pies each.)

#### Hindi :—

Hindi Lipi Bodh, no. II, revised edition of 1923, published by the Indian Press, Allahabad. (1 anna 3 pies.)

or

Copy-slips, nos. II and III, by Kamta Prasad, published by Raghunath Prasad and Sons, Cawnpore. (1 anna 3 pies each.)

or

Hindi Model Copy-slips, nos. II and III, School Book and Apparatus Dépôt, 406, Fatehganj, Lucknow. (1 anna 3 pies.)

or

Hindi Copy-slip no. 3, for Class III, published by the Indian Press, Ltd., Allahabad. (1 anna 3 pies.)

or

Lipi Bodh Hindi copy-slips nos. II and III, by C. L. Malviya, (1st edition) published by Bhargava School Dépôt, 15-16, Aminabad Park, Lucknow. (1 anna 3 pies each.)

### ARITHMETIC.

#### Classes I and II.

Urdu :-

Vernacular Lower Primary Arithmetic, revised 1930 edition, by Chandra Mauli Shukla, published by P. C. Dwadesh Shreni & Co., Aligarh. (8 annas.)

or

Modern Vernacular Arithmetic, Book I, by Jwala Sahai Gupta, published by the School Book and Apparatus Dépôt, Lucknow.

or

Blackie's Arithmetic, Book I, by Ram Swarup Vaish, published by Blackie and Son. (8 annas 6 pies.)

or

Lower Primary Arithmetic for Vernacular Boys' Schools by K. C. Bhattacharya, published by Longmans, Green & Co., Calcutta. (9 annas.)

or

The National Press Lower Primary Arithmetic, Part I in Urdu, by P. L. Srivastava, M.A., D.Phil. (Oxon), published by National Press, Allahabad. (8 annas.)

Onkar Ilmulhisab, Part I, 1930 edition, by Chaitanya Das and Shyam Sundar Lal Shukla, published by the Onkar Press, Allahabad. (8 annas.)

or

Hindustani Ilmulhisab, Part I in Urdu, by Salig Ram Varma, M.A., B.Sc., published by Hindustani Book Dépôt, Lucknow. (8 annas.)

**Hindi :—**

Vernacular Lower Primary Arithmetic, revised 1930 edition, revised by Chandra Mauli Shukla, published by P. C. Dwadesh Shreni & Co., Aligarh. (6 annas.)

*or*

Modern Vernacular Arithmetic, Book I, by Jwala Sahai Gupta, published by the School Book and Apparatus Dépôt, Lucknow.

*or*

Blackie's Arithmetic, Book I, by Ram Swarup Vaish, published by Blackie and Son. (7 annas 6 pies.)

*or*

Longmans' Vernacular School Arithmetic, Part I, by K. C. Bhattacharya, published by Longmans, Green & Co., Calcutta. (8 annas.)

*or*

Onkar Ankaganit, Part I, 1930 edition, by Chaitanya Das and Shyam Sundar Lal Shukla, published by the Onkar Press, Allahabad. (6 annas.)

*or*

Hindustani Ankaganit, Part I in Hindi, by Salig Ram Varma, M.A., B.Sc., published by Hindustani Book Dépôt, Lucknow. (7 annas.)

*or*

The National Press, Lower Primary Arithmetic, Part I in Hindi, by P. L. Srivastava, M.A., D.Phil. (Oxon), published by National Press, Allahabad. (7 annas.)

**Classes III and IV.**

**Urdu :—**

Vernacular Upper Primary Arithmetic, revised 1930 edition, revised by Chandra Mauli Shukla, published by P. C. Dwadesh Shreni & Co., Aligarh. (10 annas.)

*or*

Modern Vernacular Arithmetic, Book II, by Jwala Sahai Gupta, published by the School Book and Apparatus Dépôt, Lucknow.

*or*

Blackie's Arithmetic, Book II, by Ram Swarup Vaish, published by Blackie and Son.

or

Upper Primary Arithmetic, for Vernacular Boys' Schools, by K. C. Bhattacharya, published by Longmans, Green & Co., Calcutta. (11 annas 6 pies.)

or

Onkar Ilmulhisab, Part II, 1930 edition, by Chaitanya Das, and Shyam Sundar Shukla, published by the Onkar Press, Allahabad. (9 annas.)

or

The National Press Upper Primary Arithmetic, Part II in Urdu, by P. L. Srivastava, M.A., D.Phil. (Oxon), published by National Press, Allahabad. (8 annas.)

or

Hindustani Ilmulhisab, Part II in Urdu by Salig Ram Varma, M.A., B.Sc., published by Hindustani Book Dépôt, Lucknow. (8 annas.)

*Hindi :—*

Vernacular Upper Primary Arithmetic, revised 1930 edition, revised by Chandra Mauli Shukla, published by P. C. Dwadesh Shreni & Co., Aligarh. (8 annas.)

or

Modern Vernacular Arithmetic, Book II, by Jwala Sahai Gupta, published by the School Book and Apparatus Dépôt, Lucknow.

or

Blackie's Arithmetic, Book II, by Ram Swarup Vaish, published by Blackie and Son.

Longmans' Vernacular School Arithmetic, Part II, by K. C. Bhattacharya, published by Longmans, Green & Co., Calcutta. (10 annas.)

or

Onkar Angkanit, Part II, 1930 edition, by Chaitanya Das and Shyam Sundar Lal Shukla, published by the Onkar Press, Allahabad. (8 annas.)

or

Hindustani Angkanit, Part II in Hindi, by Salig Ram Varma, M.A., B.Sc., published by Hindustani Book Dépôt, Lucknow. (8 annas.)

or

The National Press Upper Primary Arithmetic, Part II in Hindi, by P. L. Srivastava, M.A., D.Phil (Oxon), published by National Press, Allahabad. (8 annas)

*Books recommended for teachers' use :—*

Mahajani Rityanusar Hindustani Bahi Khata, Part I (in Hindi), by Ganga Saran Sharma, and Guru Prasad Shukul (1927 edition), published by School Book and Apparatus Dépôt, 406, Fatehganj, Lucknow. (4 annas.)

or

Arithmetic Bahi Khata (in Urdu), by Sagarmal and Ram Kunwar Agarwala, published by Gupta Bros. & Co., Mandi Dhanaura, Moradabad. (4 annas.)

or

Arithmetic Bahi Khata (in Hindi), by Sagarmal and Ram Kunwar Agarwal, published by Gupta Bros. & Co., Mandi Dhams, Green & Co. (7 annas.)

Onkar Ganit Praveshika, published by Onkar Press, Allahabad. (3 annas.)

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**GEOGRAPHY.**

**Class IV.**

*Urdu :—*

Vernacular School Geography for Class IV, published by Longmans, Green & Co. (7 annas.)

or

National Press ka Vernacular School Jughrafiya, Part I, by Munshi Lal Agarwala, published by National Press, Allahabad. (5 annas.)

or

Vernacular School Jughrafiya, Part I, new edition, 1929, by Madan Lal Jain, published by Macmillan and Co. (8 annas.)

*Hindi :—*

Vernacular School Geography for Class IV, published by Longmans' Green & Co. (6 annas.)

or

National Press ka Vernacular School Bhugol, Part I, by Munshi Lal Agarwala, published by National Press, Allahabad. (5 annas.)

or

Vernacular School Bhugol, Part I, new edition, 1929, by Madan Lal Jain, published by Macmillan & Co. (6 annas.)

Wall maps and books recommended for teachers' use :—

Bhugol-Pathan-Pranali, by Thakur Jagdeo Singh, 'Visharad', published by Dr. Indradeo Prasad Shashtri, Tirthraj Press, Allahabad. (8 annas.)

Wall map of United Provinces of Agra and Oudh (in Urdu and Hindi combined), 1930, edition, by Girdhar Lal Pacholi, published by the Manager, Nandan Trading Company, Agra. (Rs. 3.) (Improved edition.)

or

Wall Map of United Provinces, of Agra and Oudh (in Urdu and Hindi combined), published by the Indian Press, Ltd., Allahabad. (Rs. 3.) (Improved edition.)

## DRAWING.

### Class I.

Macmillan's Official Drawing Book, no. 1 (6 annas); or Nelson's Graduated Drawing Book no. I; or Indian Drawing Books for Vernacular Schools, Book no. I, published by the Indian Press, Allahabad (4 annas); or Banbery's Scholar's Drawing Book no. I, in Urdu or Hindi, published by the Indian Press, Allahabad (6 annas), or Indian Drawing Copy-slips for Vernacular Schools, no. 3, published by the School Book and Apparatus Dépôt, Lucknow (slater to be used during the first half-year, then paper). (2 annas.)

or

Saraswati Drawing Book no. 1 by S. R. Varma, M.A., published by Saraswati Publishing House, Agra. (annas 3.)

### Class II.

Macmillan's Official Drawing Book, no. 2 (6 annas); or Nelson's Graduated Drawing Book no. 2; or Indian Drawing Books for Ver.

macular Schools, Book no. 2, published by the Indian Press, Allahabad (4 annas); or Banbery's Scholar's Drawing Book no. 2, in Urdu or Hindi, published by the Indian Press, Allahabad (6 annas); or Indian Drawing Copy-slips for Vernacular Schools, no. 4, published by the School Book and Apparatus Dépôt, Lucknow. (2 annas.)

*or*

Saraswati Drawing Books no. 2 by S. R. Varma, M.A., published by Saraswati Publishing House, Agra. (annas 3.)

### Class III.

Macmillan's Official Drawing Book, no. 3 (6 annas) or Nelson's Graduated Drawing Book no. 3; or Indian Drawing Book no. 3, revised edition, published by the Indian Press, Allahabad (4 annas); or Banbery's Scholar's Drawing Book, no. 3, in Urdu or Hindi, published by the Indian Press, Allahabad. (6 annas); or Indian Drawing Copy-slips for Vernacular Schools no. 5, published by the School Book and Apparatus Dépôt, Lucknow. (2 annas.)

*or*

Modern Drawing Series, Book I by B. R. C. Singhal, M.A., T. G. (Lon.) published by Gupta Brothers and Co., Educational Publishers, Khurja, U. P. (annas 6). (Revised edition.)

*or*

Saraswati Drawing Books no. 3 by S. R. Varma, M.A., published by Saraswati Publishing House, Agra. (annas 3.)

### Class IV.

Macmillan's Official Drawing Book, no. 4 (6 annas); or Nelson's Graduated Drawing Book no. 4; or Indian Drawing Book no. 4, revised edition, published by the Indian Press, Allahabad (4 annas); or Banbery's Scholar's Drawing Book no. 4, in Urdu or Hindi, published by the Indian Press, Allahabad (6 annas); or Indian Drawing Copy-slips for Vernacular Schools, no. 6, published by the School Book and Apparatus Dépôt, Lucknow.

*or*

Modern Drawing Series, Book II, by B. R. C. Singhal, M.A., T. G. (Lon.), published by Gupta Brothers and Co., Education Publishers, Khurja, U. P. (annas 6.) (Revised edition.)

or

Saraswati Drawing Books no. 4 by S. R. Varma, M.A., published by Saraswati Publishing House, Agra. (annas 3.)

NOTE.—Teachers of drawing in schools where Banbery's Scholar's Drawing Books are used are recommended to use "Teachers' Drawing Manual" in Urdu or Hindi, by H. Banbery, published by the Indian Press, Allahabad. (Rs. 2.)

### APPENDIX III.

#### Physical exercises.

The form of physical training is left to the discretion of head teachers; physical training not necessarily requiring the use of apparatus should be adopted. In the Preparatory section the exercises should be short and simple.

#### *Books recommended for teachers' use :—*

"Physical Drill," by J. C. Kempster and G. R. Kaye, Macmillan & Co. (12 annas.)

NOTE.—Urdu and Hindi versions of the book have also been approved for use in schools. (Re. 1 each.)

Ibtada-i-Scouting yani Mukammal Hidayat Tayari-o-Janch, by Khairati Lal Johri, Deputy Inspector of Schools, Bijnor. (6 annas.)

Rahnumai Scouting, by Niranjana Singh, M.Sc., Professor, Randhir College, Kapurthala (Punjab). The Mercantile Press, Lahore. (Re. 1-6.)

Referee Association Football in Urdu, by Chaudhri Bhawal Khan Nagra, English Master, Government High School, Sialkot. (6 annas.)

Urdu Tarjuma-i-Qawaid Football Association, by Thakur Das, Manager, S. R. Thakur Sports Works, Leiah (Muzaffargarh). (6 annas.)

Vyayam Shiksha for teachers' use, by Kashi Ram Dube, published by the Indian Press, Ltd., Allahabad. First edition. (12 annas.)

Scout Drill and Khel, Parts I and II, by Sri Ram Bajpai, published by Indian Press, Allahabad. First edition. (Part I—12 annas Part II—Re. 1-8.)

## APPENDIX IV.

## Scheme of Object Lessons.

*Instructions to Teachers.*

## OBJECT LESSONS.

*Aims.*—The chief aims of these lessons are to guide the children in the use of their senses, seeing hearing, feeling, smelling and tasting. In the higher classes the lessons will further be used to train children to reflect on the results of their observations and to reason about things; they will compare and contrast things. The lessons may add to the children's intelligent knowledge of common things, and be made the basis of instruction in language and drawing. But no endeavour should be made to impart to children information, however useful it may be, without making them handle and examine things for themselves.

*Choice of Objects.*—Familiar objects, chosen from the locality in which the school lies, are recommended. These are better than unfamiliar objects as means of guiding children in the use of their senses; we shall make them observant of differences if we get them to see what they have previously failed to notice. Further, objects which can be so easily procured that all children may bring a specimen to the class and examine it, will give more interest to the lessons than objects which can only be shown from the teacher's desk or by picture.

The objects should be chosen with reference to the season of the year and to the age of the pupils. Thus, lessons in which flowers are being examined should be taken in the months of March and April, when the children will have opportunities of examining many varieties and, while a lesson on germination would be suitable for Class IV, it would be too difficult for Class II.

In order to give opportunities for comparison the objects chosen should have some connection with others. In the lowest classes they will be linked together by dealing with similar groups of objects (e.g., common crops), between which the pupils may note comparison and contrast. In the higher classes there should be more continuity of subjects; the series of lessons should give the children opportunities to make deductions and should lead them to the statement of simple general truth such as "animal life is dependent on plant life." By association in this way the lessons will gain greatly in interest and will admit of gradual progress in difficulty along particular lines.

The actual objects should, wherever possible, be obtained. Nearly all the lessons in the following lists can be illustrated by objects which the children can bring to school. If the teacher encourages his pupils to exert themselves in this way, he will help greatly to make his lessons a success. Pictures are a poor substitute for the real object and should be used in the place of objects only when lessons are given on certain animals which cannot be shown in the school, e.g., camel, elephant, but which may form the subject of a lesson if children are familiar with them.

It is not necessary to have many objects in a course. The teachers should not attempt to give lessons in all the objects mentioned in the following list; *he should make a selection.* Habits of detailed observation are better cultivated by examining a few objects thoroughly than by cursorily looking at many.

*Method of teaching.*—The first necessity in an object lesson is an object to observe. It would not be necessary to say this, were it not a fact that many teachers are content with a picture, a model, or even a description from a book. A picture or model will help to make a description more vivid, but cannot take the place of the object itself.

The teacher should first find out from the class all they knew about the object. He should then lead them to examine it more closely and notice things which formerly they had failed to observe. Finally, he should lead them to see how the object is adapted by its structure to its uses, ways of living, or mode of growth.

The most common fault of these lessons is that the children do nothing but listen. The teacher should guard against the temptation of imparting *much information* in one lesson, for children become tired and bewildered by many facts and descriptions. The information should only be such as the object itself gives; any further information may, if necessary, be given in other lessons. Thus a lesson on stamps may be an object lesson, but an account of the way in which letters are conveyed from one place to another should be left to the reading or composition lesson; while the growth of particular plants may be studied in the observation lesson; the distribution of crops in a particular part of the country should be taught in the geography lesson.

"One thing at a time" is a good rule. But while it is not desirable in one lesson to deal with several kinds of objects, there should always be several specimens of an object in the class and, if possible, each pupil should have a specimen before him.

Questions should be put at the beginning of a lesson to find out what the children already know about the object. In the course of the

Lesson questions should be put in order to stimulate the children to think and to look at things for themselves. At suitable stages or at the end of the lesson the teacher should question the class to find out what they have grasped. He should also, at the end of suitable stages, encourage the class to ask him questions.

The teacher's language should be simple and his own (i.e., not quoted from a text-book), and if he uses technical terms these should only be such as the boys are likely to use subsequently. The value of the lessons as a means of training pupils in the correct use of language in speaking and writing should not be overlooked. The pupils should therefore be encouraged to express the results of their observations by accurate descriptions in speaking or writing and, while the teacher should not make his lesson one on grammar or composition, he should not allow careless expressions to pass uncorrected. In the preparatory classes the lessons should take the form of conversations between teacher and pupils. In classes I and II the children should be asked to write the name of the object and, where possible, to make drawing. In classes III and IV simple records should be made and children should invariably be asked to make simple drawings. The records may at first be copies of the teacher's summaries on the blackboard, but these should be replaced as soon as possible by simple descriptions written by the pupils in their own words.

More and more will be expected of pupils as they grow older. In the infant class the lessons must be short and bright, and questions will be put to make children examine things. In classes I and II the objects chosen will be more difficult of analysis and will require more careful examination than those of the infant class; pupils will be led to compare and contrast things, and will be questioned to make them think why the properties and structure of the objects are specially adapted to its uses, ways of living or mode of growth. In classes III and IV there will be greater demand than in previous classes on the reasoning powers; things will be classified, deductions will be made, general truths will be arrived at, and a training will be given in exact measurement.

Diagrams and drawings by the teacher on the blackboard are valuable as means of giving interest to a lesson; but these should follow, not precede, the children's observation; the blackboard sketches should not be elaborate drawings. The fewer lines in them the better; each drawing should bring out only one or two points, for any elaboration will only distract the class.

When experiments are performed, information should not be given as to what may be expected to happen; when the experiment has been carried out, the children should be questioned and led to reason out for themselves what it teaches.

For successful teaching the *teacher's interest* is the first essential. Instead of depending on books, he should work at the objects himself; and guide the children along the lines of his own observation and reasoning.

### Scheme of Object Lessons.

Teachers should *select* their lessons from the following lists. They should choose from lists objects which are found in the district in which the school is situated, and are best suited to the ages of the children.

#### Infant Class.

*Common things.*—Simple forms; sphere, cube, cylinder—illustrated by balls, pieces of sugarcane, pencils, *pichkari* (syringe), *bansri* (flute), bricks. Colour: the children should be led to distinguish the colour—white, black, red, green, yellow and blue. The following should be used as illustrations:—Flowers, coloured paper, cloth, wood, beads, *churis* (bangles).

*Common animals and birds.*—Cow, goat, sheep, cat, dog, parrot, pigeon, *titar*.

*Common fruits.*—Guava, mango, orange, tamarind, *ber*.

*Common articles of food.*—Milk, water, bread, *dal* (lentil), *ghee* (clarified butter), *dahi* (curd).

#### Class I.

*Common things.*—*Takhti*, slate, knife, *khurpa* (hoe), *pharua* (spade), *khapra* (tile), *ghara* (pitcher).

*Common animals and birds.*—Buffalo, horse, ass, camel, sparrow, *maina*.

*Common crops.*—Wheat, barley, gram, maize, rice, *bajra*, peas.

*Common vegetables.*—*Sag* (spinach), *bhindi* (lady's finger), *gajar* (carrot), *mul* (radish), potato, *kohra* (pumpkin).

#### Class II.

*Common things.*—Stamps, metals (iron, brass, copper), coins, clay, sand, sulphur, saw, *chheni* (chisel), *barni* (borer), *hal* (plough), harrow, *kolhu* (sugar mill).

*Common animals.*—Elephant, monkey, fish, snake, squirrel, rabbit, frog (to be selected only if they are frequently seen in the locality and if suitable pictures are available), peacock, crow, blue-jay.

*Common trees and plants.*—Mango, *pipal*, *nim*, tamarind, bamboo, cotton, castor plant.

Serial number.	Subject.	Detailed syllabus.	Month of the year in which the subject is to be taught.
		<b>Class III.</b>	
1	Classification of objects.	Living and non-living objects. Natural and artificial objects.	July.
2	Plants and their parts.	Examination of the number of the common flowering plants of the neighbourhood with reference to their flowers, leaves, stems, roots, fruits and seeds, and also to the following :—  (a) Flowers yield seeds and fade away.  (b) The stem holds the leaves up to the sunlight and supports the flowers.  (c) The root fixes the plant in the soil.	July and August
3	Flowers	Examination of some of the common flowers of the season with reference to the following parts :— Petals, sepals, and stamens. The following are examples which may be studied :—  <i>Khira</i> (cucumber), <i>bhindi</i> (lady's finger), <i>lauki</i> (gourd), <i>jasmine</i> , <i>rose</i> , <i>dhatura</i> , <i>gul hazara</i> .	August and September.

Serial number.	Subject.	Detailed syllabus.	Month of the year in which the subject is to be taught.
4	Fruits ...	<p>Examination of some of the common fruits of the season with reference to differences in colour, smell, taste, shape and size, and also to the fact that fruits contain seeds. The following fruits may be examined :—</p> <p>Custard-apple (<i>sharifa</i>), lemon, orange, cucumber.</p>	September and October.
5	Leaves and their classification.	<p>Classification of leaves of different plants; leaves to be brought by pupils :—</p> <p>(a) By shape—</p> <p>(i) Long and narrow, e.g., grasses, especially the following :—</p> <p><i>Kans, makka, sarkarda</i>, wheat, rice, barley.</p> <p>(ii) Needle-shaped, e.g., <i>chir</i>.</p> <p>(iii) Oval shaped, e.g., <i>tidhara bargad</i>.</p> <p>(b) By structure—</p> <p>(i) Simple (one-blade, e.g., mango, <i>pipal</i>, <i>bargad</i>, mulberry, <i>kela</i>).</p>	November and December.

Serial number.	Subject.	Detailed syllabus.	Month of the year in which the subject is to be taught.
		<p>(ii) Compound (blades divided into separate leaflets), e.g., <i>arhar</i>, <i>gram</i>, <i>nim</i>, <i>shisham</i>.</p> <p>(c) By margin—</p> <p>(i) Leaves with entire margins, e.g., <i>mango</i>, <i>bargad</i>, <i>mahua</i>, <i>gular</i>, <i>bamboo</i>, <i>jack-fruit</i>.</p> <p>(ii) Leaves with toothed margins, e.g., <i>mulberry</i>, <i>castor</i>, <i>rose</i>.</p> <p>(d) By veining—</p> <p>(i) Net-veined leaves, e.g., <i>pipal</i>, <i>bargad</i>, <i>gourd</i>, <i>melon</i>.</p> <p>(ii) Parallel-veined leaves, e.g., <i>sugarcane</i>, <i>bamboo</i>, <i>haldi</i>.</p>	
6	Flowers ...	<p>Examination (resumed) of some of the common flowers of the winter season with reference to their petals, sepals, and stamens. The following may be studied:—<i>Cotton</i>, <i>poppy</i>, <i>bhanta</i>, <i>mustard</i>, <i>dhaniya</i>, <i>peas</i>.</p>	January.

Serial number.	Subject.	Detailed syllabus.	Month of the year in which the subject is to be taught.
7	Trees ...	<p>Identification of some of the common trees of the neighbourhood by their leaves, of which drawings should be made by the pupils.</p> <p>The following are examples which may be studied :—  <i>Shisham, nim, mahua, sal, mango, pipal, bargad, katha, mulberry, bamboo, toddy-palm, date-palm.</i></p>	January and February.
8	Fruits ...	<p>Examination of some of the common fruits of the winter season, as in September and October.</p> <p>The following are examples which may be examined :— <i>Guava, plum, kamrakh, anar, anjir.</i></p>	February.
9	Observation lessons.	<p>Observation lessons on the following :— Cotton, jute, tobacco, wool, paper and pencil.</p> <p style="text-align: center;">Class IV.</p>	March and April.
1	Needs of a plant.	<p>Plants require : (1) sunlight, (2) air, (3) water. Plants are living things.</p>	July.

Serial number.	Subject.	Detailed syllabus.	Month of the year in which the subject is to be taught.
2	Flowers ..	<p>Examination of some of the common flowers of the season with reference to their carpels, sepals, petals, and stamens. The following are examples which may be examined :—</p> <p>Rose and jasmine—to show petals.  Rose and <i>dhatura</i>—to show sepals.  <i>Dhatura</i> and <i>bhindi</i>—to show carpels.</p>	August.
3	Examination and classification of plants used for food.	<p>A simple classification of plants used as food by men or animals and an examination and comparison of these. The following are examples :—</p> <p>(a) Seeds used as food  —<i>arhar</i>, <i>urd</i>,  pea, gram, <i>mung</i>,  bean.</p> <p>(b) Fruits used as food  —orange, lemon,  peas, guava,  mango, banana.</p> <p>(c) Roots used as food  —turnip, carrot,  radish, sweet  potato.</p> <p>(d) Stems used as food  —sugarcane,  <i>ganthgobi</i>.</p> <p>(e) Leaves used as food  —cabbage, <i>chana</i>  <i>sagmethi</i>, <i>sarson</i>,  <i>marsa</i>, <i>palak</i>.</p>	September and October.

Serial number.	Subject.	Detailed syllabus	Month of the year in which the subject is to be taught,
4	Mensuration	<p>Yard measure.. ..</p> <p>Examination of a yard measure and its divisions. How to measure to the nearest inch.</p> <p>Class to guess length to nearest yard, e.g., lengths of class-room, height of door, etc. These to be verified by measurements made by the class. Class also to guess lengths to the nearest foot of smaller objects, e.g., width of table, etc., and the measurements to be verified by experiments.</p> <p>Foot rule. Examination of a foot rule (divided into eighths and tenths of an inch). To copy part of the rule and its divisions. How to measure to the nearest eighth or tenth of an inch.</p> <p>Measurement of straight lines.</p> <p>Blocks of wood of rectangular shape, rectangular pieces of cardboard, tin, etc., for measurement. Measure lengths of size in inches and eighths of an inch and also in tenths of an inch, expressing the latter in the decimal notation.</p>	<p>November.</p> <p>December.</p> <p>January.</p>

Serial number.	Subject.	Detailed syllabus.	Month of the year in which the subject is to be taught.
5	Flowers ...	<p>Examination (resumed) of some of the common flowers of the winter season, with reference to their nectaries as well as petals, sepals, stamens, and carpels (previously done).</p> <p>The following are examples which may be studied :—</p> <p>Mango, mustard, and <i>dhanya</i>—to show nectaries.</p> <p>Mustard and cotton—to show carpels.</p> <p>Mustard, peas, beans, and cotton—to show stamens.</p> <p>Poppy and rose—to show sepals.</p> <p>Cotton and gourd—to show petals.</p>	February.
6	Observation lessons.	<p>Observation lessons on the following :—</p> <p>Wood, tobacco, and the common vegetable oils, e.g., mustard linseed, cocoanut, and <i>sesamum</i>.</p>	March and April.

ALLAHABAD :  
February 29, 1932.

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Registered no. A383\*



SUPPLEMENT  
TO THE

# Government Gazette,

THE UNITED PROVINCES OF AGRA AND OUDH.

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ALLAHABAD : SATURDAY, MARCH 12, 1932.

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PART IV.

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CURRICULUM FOR THE PRIMARY TEACHERS'  
CERTIFICATE EXAMINATION, 1933.



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I.—First Language.

(a) The following readers are recommended:—

Urdu—

- (1) Shugufa-i-adab, Part III, by Maulvi Naimur Rahman, published by the Indian Press, Ltd., Allahabad. (5 annas.)

Supplementary—

- (1) Tobat-ul-Nasuh, by Dr. Nazir Ahmed, National Press, Allahabad, price Re. 0-12-0.  
(2) Manazir-i-Qudrat, Part I, by Muhammad Ilias Barni, Institute Press, Aligarh, price Re. 1.  
(3) Jazbat-i-Fitrat, Part III, by Muhammad Ilias Barni, Institute Press, Aligarh, price Re. 1.

Hindi—

- (1) Pad Samuchaya, by P. Kampta Prasad Guru, published by Indian Press, Allahabad, price Re. 0-10-0.  
(2) Gadya Maladrasha, by Jiwan Shankar Yagik, published by Ram Prasad and Brothers, Agra, price Re. 0-12-0.

Supplementary—

- (1) Satya Harishchandra, edited by P. Jiwan Shankar and Pandit Kedar Nath Bhatt, published by Ram Narain Lal, price Re. 0-6-0.  
(2) Sapta Saroj, by Prem Chand, published by Hindi Pustak Agency, price Re. 0-8-0.  
(3) Jaidarth Badh, by Maithili Sharan Gupta, published by Sahitya Sadan, Jhansi, price Re. 0-8-0.

(b) Grammar—

Urdu—Tahzib-ul-Qawaid, Part II, for Class VII of Vernacular Schools, by M. H. S. Jalal Uddin Ahmad Jafri, published by the Indian Press, Allahabad, price Re. 0-5-0.

Hindi—Hindi Middle Vyakaran, published by Agarwala Press, Allahabad. (4 annas 9 pies.)

(c) Composition.

II.—Second Language.

(a) The following books are recommended:—

- (1) Urdu-i-Jadid, Part I, published by Rai Sahib L. Ram Dayal Agarwala, Allahabad, price Re. 0-8-0.

or

Mufad-i-Urdu, Part I, published by Jafri Brothers, Allahabad, price Re. 0-8-0.

**Hindi—**

- (1) Hindi Sahitya Sangrah, Part I, by Pandit Ganga Dat Pande, Edition 1924, price Re. 0-8-0.

*or*

Bhasha Pravesha, Part II, by Din Dayal Srivastava, price Re. 0-8-0.

**(b) Grammar—**

Urdu—Tahzib-ul-Qawaid, by M. H. Jalal Uddin Ahmad Jafri, published by the Indian Press, Allahabad, price Re. 0-2-0.

*or*

Qawaid-i-Urdu, Part I, by M. Jamal Uddin Haider, published by R. S. Ram Dayal Agarwala, Allahabad, price Re. 0-2-0.

Hindi—Bhasha Vyakaran, by Chandra Mauli Sukul, Indian Press, Allahabad, price Re. 0-4-0.

*or*

Hindi Vyakaran for Classes III and IV, by Babu Ganga Prasad, published by R. S. Ram Dayal Agarwala, Allahabad, price Re. 0-3-0.

**(c) Translation and Composition.**

Book recommended for teachers' use :—

Saliqu-i-Tahrir, by Muhammad Muslim, Professor, St. Columbas College, Hazari Bagh, published by the author. (Re. 1.).

NOTES.—(1) The students of the training classes in the Kumaun division provided with an Urdu teacher may read "Asan Urdu Reader, Parts III and IV for classes III and IV of Vernacular Schools for Boys," published by the Indian Press, Allahabad, and "Tanwir-i-Urdu," by Maulvi M. G. Zubaid Ahmad, Indian Publishing House, Allahabad, 1927 edition (4 annas).

(2) The students of such training classes in the Kumaun division as have not an Urdu teacher are allowed to take the following additional course in Hindi in place of Urdu :—

(1) Satya Harish Chandra Natak, by Bharatendu Harish Chandra, published by the Nagri Pracharini Sabha, Benares (3 annas).

(2) Tulsi Das Ramayan, Sundar Kand.

N.B.—The books mentioned should be read for their matter, for the increase of vocabulary, the improvement of style in composition, and the cultivation of the power of rapid comprehension of a written passage rather than for parsing, analysis, and literal paraphrase. Detailed study is not required. Pupils should be encouraged to read as widely as possible. The examination will be to test the pupil's ability to comprehend a written passage and questions on the subject-matter of the books named will be set.

**III.—Methods of Teaching.****(a) Language—**

The following syllabus is prescribed for the purpose :—

(i) Students should know the common methods employed in the early stages in teaching, reading, and writing, they should have practised one of them. They should themselves make block letters,

murakkabat in Urdu, sanyukt letters in Hindi, and test-cards of various sorts as aids in the teaching of reading. They should study how children can be usefully employed, with such aids, in teaching themselves while the master is otherwise engaged, e.g., the children can be employed in word-building, sentence-building, in filling in gaps in their test-cards, and giving answers to questions on the test-cards. The teaching of writing should begin when words and letters can be recognized by the children. In writing attention should be paid to the need for beginning with large letters; to the use of hygienic material, the correct and healthy posture; suitable media for child beginners, e.g., sand, clay, seeds, etc.; the proper method of holding and manipulating the pen; and the care of pens, ink, and takhtis.

(ii) After recognition of individual letters and words is achieved and the power of copying individual letters, murakkabat, sanyukt letters and words is acquired, later stages in the teaching of language are—

- (a) Clear, loud reading (i) for the sake of pronunciation and proof of comprehension and (ii) for conveyance of written ideas to others (test; criticism of the reading by the class with books closed).
- (b) Silent reading as a chief means of acquiring knowledge. Practice by flash reading, and private reading in class by individuals and groups (tested by subsequent questioning), home-reading.
- (c) Dictation. The proper method of dictation and its correction. Aim; concentration and exact reproduction. Subsidiary aims; spelling and penmanship.
- (d) The teaching of penmanship as an art.
- (e) Composition and grammar. The cultivation of the power of correct expression by means of (i) oral work, e.g., discussion in class dramatization of stories read; oral composition with special emphasis on the grammatical functions of words and phrases, (ii) written composition as a means of self-expression; the letter, the story; the description; the use of objects, pictures and familiar topics as a basis for composition. The essential importance of intelligent and intelligible self-expression as a correlating factor of all school activity, both in class-room and in playground.

The book *Tarik-ut-Talim Urdu*, by Suraj Narayan Mathur, Headmaster, Government Normal School, Allahabad, published by the Delhi Printing Works, Delhi, is recommended for use by the pupil-teachers in learning the methods of teaching the Urdu alphabet.

(b) *Arithmetic*—

Students should possess a thorough knowledge of the method of teaching the entire course prescribed in Arithmetic up to and including

that for class IV of vernacular schools with special attention to the aids in the early stages and the logical setting out of sums in the later stages.

The following syllabus is prescribed for the purpose :—

1. The aims in teaching arithmetic (utilitarian and educational).
2. How to teach—
  - (1) Counting. (The correct use of concrete aids).
  - (2) Grouping.
  - (3) Addition and subtraction with concrete aids. The use of the ball frame. Tables of addition. Abstraction from concrete.
  - (4) The written figures and notation. The use of signs. Building up of notation (Practical and inexpensive devices).
  - (5) Multiplication tables. (Building up tables).
  - (6) Measuring, weighing, and the use of money with simple concrete aids.
  - (7) Multiplication and division.
  - (8) The compound rules, fractional tables, factorization, vulgar fractions, simple interest, practice, account-keeping, and compound interest.
  - (9) Mental arithmetic (the importance of mental arithmetic in all particular reference to local subjects).
3. (1) The necessity for ascertaining the child's knowledge of number on admission and when the child has in the infant class reached definite stages of progress.
- (2) The importance of cleanliness, neatness, legibility, accuracy, speed, and logical arrangement in the setting out of written work; the necessity of supervising rough work.
- (3) The value of approximate answers and ingenious methods of calculation.

NOTE.—The teaching of simple account-keeping (Khata and Roznamcha) should be practised.

#### *Books recommended for use.*

Arithmetic, Shiksha Pranali, by Bhattacharya and Sukul (Urdu and Hindi), published by the Indian Press, Ltd., Allahabad (12 annas each version).

#### *(c) Geography—*

The book recommended for use of teachers is :—Vernacular School Geographies (Urdu or Hindi), published by Longmans Green & Co.

How to teach the geography of the area round the school; and then of the district, the province, and India, simple plan and map-making and the proper study of district and provincial maps and the map of India.

NOTE.—Methods of open air instruction must receive particular attention; school excursions with the object of encouraging the boys to observe facts and absorb knowledge of a kind useful to a farmer should frequently be undertaken.

*With class II of the Model School.*

1. How to find direction by the sun and by the pole-star. The drawing of a compass card by class and teacher.
2. Measurement and estimation of distances by uncertain measures, girah, hat, pace, etc. Measurement in standardized distances, inch, foot, yard, furlong. The use of the footrule. Practice in estimating by eye.
3. Reduction to simple scales.
4. How to fix on a horizontal blackboard the position of one object in relation to another by plotting direction and distance reduced to scale.
5. How to make a plan of an ink-pot, box, etc., by outlining the base, by measurement, without reduction and with reduction to a scale.  
The plan of a house as shown by its foundations.  
Plan of the class-room on blackboard from the children's measurements and reductions and the teacher's plotting.  
Finding positions in the room and on the plan.  
Plan of school and exercises in finding positions.

*With class III.*

1. Combination of map and plan, making a map of school environment. Exercises in reduction and enlargement of maps.
2. Plotting walk on slate using pace as unit of measure and inserting objects by estimating rectangular distance from route by eye.
3. Reading map of district. Knowledge of signs. Measurements of map distances and calculations of actual distances (a) as crow flies, (b) along roads, railways, etc., from home village to various places such as the thana, the post office, the district headquarters. (This is the first exercise in visualizing what is beyond the actual horizon.)
4. Plotting walk, using signs on district map for woods, swamps, jheels, etc. Judging distances with the eye.
5. Exhibition of patwari's map and short explanation of its use.

NOTE.—In the beginning the use of a map should be taught outdoors with the map horizontal and orientated; directions should be taught from the point of the map representing the position of the student.

*With class IV.*

1. Revision of map work, especially plotting.
2. Study of map of the United Provinces, as of district, with particular attention to physical features, communications, and positions of the large towns in relation to communications and products of the surrounding country.
3. Study of the map of India.
4. Use of outline maps.

5. The use of pictures and maps as aids to the text.

B.—Observation work on landscapes, on local differences of soil, etc., and their effect on vegetation; observation on means of transport, on local industries, on commerce, etc., on the habits of some animals and birds, on the seasons, the sun, moon, pole-star, etc. Making simple cheap apparatus from materials to hand, e.g., sundial and apparatus for demonstrating seasons and length of day and night.

*With class II.*

1. Illustration in the rainy season of the following :—Lake, bay, or gulf, strait, island, cape, isthmus, peninsula. The simple study of water tunnels to show drainage, carrying and cutting power of water.

2. The trees round the school, their uses, the times of germinating, flowering, fruiting, and shedding of leaves.

The usual crops of the neighbourhood, times of sowing and harvest, suitability of location, supply of water by rainfall, canals, wells, tanks.

3. Local means of transport by land or water, human transport, beasts of burden—animal traction, mechanical transport.

4. Village and town industries, e.g., the potter, carpenter, spinner, weaver, blacksmith, rope-maker, cultivator, etc., and their tools, commodities in the market and where they come from.

5. Domestic animals and their usefulness to man.

6. Hours of sunrise and sunset, noonday shadows.

*With class III.*

1. Recognition during the rains of lakes, capes, islands, etc. Comparison of maps with actual forms.

Further study of stream—source, stages, bed, tributaries, distributaries, delta, flood, plain, water parting, catchment basin.

2. Different kinds of soil according to classification in patwari records. Uses of each soil as demonstrated in the neighbourhood, especially as regards pasture and cultivation. Use of patwari map to show distribution. Useful wild plants and noxious weeds in field and jheel.

3. Transport and communication—paths, kachcha and pakka roads, railways, tramways, navigable canals and rivers. The construction of roads, material, method, culverts, milestones, gradients, etc. Position of abadi in relation to roads. Road and rail communication within the district. How letters travel.

4. Industries and commerce of the district. Reasons for markets on special days and special places, animal fairs within the district, e.g., Devi Patan (Gonda), Nauchandi (Meerut), Bateshwar (Agra). Permanent markets, Chauka, Mundia, Mills, and factories (if any). Why money is used? Coins and currency notes. The shop and shopkeeper.

The mahajan, the arhata, the baya (weighmen) and other persons of the market place.

5. Wild animals and birds of the immediate neighbourhood. Where they make their homes. The times of their daily appearance. Their habits so far as can be observed. Migration of birds.

6. How to read the time by the sun and by a clock.

*With class IV.*

1. Comparison of actual landscapes and forms with representation on maps, study of mountains, hills, plateaux, passes, from nature, if possible, and from maps.

2. Study of railway by observation—station, permanent-way, signals, rolling-stock, railway bridges, steamboats, motor traffic, rivers.

3. Observation of any special local industry, e.g., carpet-weaving (Mirzapur), diary-farming (Aligarh).

4. Expansion of earlier work. Compilation, if possible, of a combined class dairy.

5. Maintenance of seasonal time chart recording weather conditions in combination with agricultural and other activities as observed by pupils and teachers.

#### IV.—School and class Management and Hygiene.

##### (a) School and Class Management.

(i) School management with reference to the primary schools. The headmaster, his duties of supervision of the work of other classes, curricula, compilation and arrangement of time-tables, classification of pupils, examinations, use of library, maintenance of material of instruction and its use; recruitment of new boys and their introduction to the new environment. The rules in the Educational Code. The District Board rules. Maintenance of Registers.

(ii) Class teaching and its principles and practice. Qualifications of an ideal teacher, general principles of teaching, the relation of play and work, the use of the voice, the use of language, the art of questioning and explanations, the preparation of lessons, the supervision of boys' exercise books, the management of combined classes and groups.

NOTE.—Reference books are—

Risala-i-Talim-o-Tarbiyat, Part I (Urdu and Hind), by Iqbal Kishan (12 annas); Hadi-ul-Mudarrisin (Urdu or Hindi) by Ladli Das (8 annas); Manual for Teachers of Primary Schools in India by J. A. Richey (Macmillan & Co.) (Urdu, Re. 1-8; Hindi, Re. 1); Manual of School Management by H. T. Knowlton (Rai Sahib Munshi Gulab Singh & Sons, Lahore), (omitting Part II, sections 10, 11, 12, and 13 of Part III and both appendices of Part III) (Urdu, Rs. 2-5-2; Hindi Rs. 2).

(b) Hygiene. Lighting and ventilation of the class room; the arrangement of class room furniture; physical exercises; their value and the reasons for them; pictures; eyesight and hearing; causes of mental fatigue; common infectious diseases; their signs and prevention; the creation of decent habits; simple casualties; first aid (the Mackenzie School Course); water, air and food with reference to their purity.

NOTE.—Aiza-o-Sehat-i-Insani or "Manushi Anga Tatha Swastha," by K. C. Bhat-tacharya, published by the Indian Press, Allahabad, recommended for use.

*Books recommended for the use of teachers.*—Tandurusti ki Pabli Kitab, by Col. J. W. D. Megaw, Indian Red Cross Society, Viceregal Lodge, Delhi. (12 annas).

or

Swastha Raksha ke Prathmic Niyama (the Hindi version of Col. J. W. D. Megaw's First Laws of Health), Indian Red Cross Society, Viceregal Lodge, Delhi. (12 annas).

or

Sehat ki Kahani, by E. Marsden, B.A., translated into Urdu by Munshi Abid Hasan Faridi, published by Macmillan & Co. (Re. 1).

or

Hindi translation of the Land of Health and the Land of Wealth, by Pandit Ram Narayan Misra, published by Macmillan & Co. (Re. 1).

V.—Civics (not required of schools in which the Rural knowledge course is taught).

Panchayats, their organization and functions; Co-operative societies, their objects and organization; the work of Education, Public Health and Agricultural Departments of Government in rural areas.

The following book is recommended :—

Ibtada-i-Risala Tamaddun (Urdu) Arambhik Nagarik Shastra. (Hindi) by Pt. Bishan Lal Kaul, published by R. S. Lala Ram Dayal Agarwala (Allahabad), price annas 6 each.

## VI.—Drawing.

### Stage I.

#### A.—The circle

... Turned objects having a circular outline, as a plate, coin, hoop, wheel, clock-face, sun, moon, etc.

B.—Modifications of circle ... Orange, apple, *ghara*, football, pomegranate.

### Stage II.

#### A.—The ellipse

... Circular objects seen in perspective become ellipses; plate, coin, hoop, clock-face, rim of vessel, etc. Also felt-cap, spectacle-glass, etc.

- B.—Modifications of the el- Egg, guava, brinjal, *papita*, jack-  
lipse. fruit, gourd, cocoanut, pear,  
etc.

Stage III.—Simple straight-lined objects.

- A.—Right-angled ... Envelope, table-top, door-window,  
box top, blackboard, etc.  
B.—Modifications ... Flag, *takhti*, T-Square, map, etc.  
C.—Perspective ... Any of the above classes of objects  
seen in perspective.

NOTE.—The method to be adopted in teaching the subject is given below.

### *Training Class Course in Drawing.*

#### **Method.**

The examination test is drawing on the blackboard only, but to enable students to pass this test they should be trained in the principles of object-drawing by means of work on paper and subsequently apply these principles to instruction of a class from the blackboard.

As it is a teacher's course the method to be adopted should be that of drawing on the blackboard to a large scale, i.e., 3 feet in each direction, as being a convenient stretch for the arm, and the drawing being then within the compass of the eye as seen by the teacher and yet large enough to be seen by the pupils at a distance of 20 feet. The drawing should be executed in as free a manner as possible, the arm being straight but flexible, and the teacher standing not less than two feet from the blackboard.

The principal aim of the drawing to be taught later is to furnish an illustrated class record of the study of the character, etc., of the things seen by the scholars in their object lessons. Thus it is necessary that the drawing should also be done in books so as to be available for future reference.

These drawings should be free in character, and, when possible, should be of the same size as the original; but if this is not possible, the scale of the enlargement or reduction should be stated below the drawing.

The standard of excellence in the drawing should not be that which shows the most neatly-executed outline drawing of the subject studied, but rather that which most clearly conveys or records the point or points brought out in the lesson given.

It will be advisable, therefore, for the teacher (as well as his pupils) to combine his drawing lesson with his object lesson, and, to ensure this, the object lessons and drawing lessons should, if possible, be consecutive periods.

The method to be adopted when teaching this subject in the vernacular schools would be that in the object lesson the teacher will draw attention to certain facts and impress them on the minds of his pupils by large sketches on the blackboard. These should be carefully copied in their books or other drawings should be made by the pupils themselves from the object under study.

This principle should also be adopted in the teacher's study, but it will be expected that his resulting drawings will show more searching observation and be executed so as to record best the character of the object under study and to impress most clearly upon the class the point illustrated.

The drawings on the blackboard (if in outline only) should be drawn with white chalk, but if representation of solid things be attempted in a solid way, they should be drawn with coloured chalks in as nearly the true colours as possible.

Sometimes where it is found difficult to make a true rendering on a black surface a large sheet of brown or white paper should be used for chalk and charcoal work.

For work in books an HB pencil will usually be found sufficient.

In drawing fruits, sectional drawings will be of great advantage.

In all possible cases drawings should be executed without the aid of guiding lines, and even when necessary very few guiding lines should be used.

#### VII.—Object lessons (not required of schools in which the rural knowledge course is taught).

Revision of the courses in object lessons prescribed for primary schools and for class V of middle schools, with special reference to the teaching of the course prescribed for primary schools.

#### VIII.—Physical exercises.

All students should take part in games regularly. Students should change their clothes for games. A banyan and shorts are recommended. Scouting should be encouraged. The following exercises given in (a) Kempster and Kaye's Physical Drill in Urdu and Hindi (Macmillan & Co.) should be done with special reference to teaching the course prescribed for primary schools and with the reasons for the various exercises :—

Chapters I to III—The whole.

Chapter IV—The whole (optional), races, jumps, and tug-of-war.

(b) Football, volleyball, gymnastics, wrestling, and other Indian games should be played.

**IX.—Rural Knowledge (for those schools only which have land, equipment and a teacher trained in the subject).**

**The Plant and how it grows.**

*Introduction.*—The wonder, beauty and mystery of nature. Why plant life should be studied first. Parts of a plant.

*Germination.*—The growth of bean and wheat seeds to be observed and compared. The manner in which the seedlings push their way through the soil to be noted and the different ways in which the roots grow. Conditions of germination. The depth at which seeds should be sown. Sowing seeds by a drill. To show by experiment that water, warmth and air are necessary for the growth of seeds.

*The Root.*—Tap and fibrous roots. Growth in length of the root. The root cap. Root hairs. To show by experiment how water is sucked into the roots. Absorption of water by roots; to be shown by using red ink.

*The Stem.*—The stem grows upwards and towards the light. Kinds of stems. The potato a swollen stem. To show by experiment how water passes up the stem. The work of the stem; to support leaves, to carry water and food taken up by the roots, to carry to different parts of the plant food made in the leaves by sunlight. Buds, and the places where they are found on branches.

*The Leaf.*—The veins, how arranged. Work of the leaves. Leaves give out water; to be shown by experiment. Air cooled by evaporation of water from leaves. Plants wither if roots, owing to injury, are unable to take in water. Care of roots when transplanting. How the leaf makes food. The leaf a food factory for the plant. The work of sunlight on the green stuff in leaves. Weeds cut off sunlight from young plants. Breathing of plants. To show by experiment that seeds and plants breathe.

*The Flower and Seed.*—The work of a plant; to ripen seeds. Parts of a flower. Fertilization. How pollen is carried by wind and insects. Development of the seeds. How seeds are scattered by wind, animals and water. Length of plant life.

**Agriculture.**

*Introduction.*—Agriculture the main occupation of India; Proportion of population engaged in agriculture. Kinds of farming; cattle grazing and where it is best practised; sheep farming; goat farming. General agriculture. Reasons why the soil in India is poor compared with that of other civilised countries. Comparison of the yield of land in India with the yield of land in other countries. Rainfall and climate; how they determine the kinds of farming.

*The Soil.*—How formed. The sub-soil. Heavy, light and medium soils. The value of lime and humus. Excess and deficiency of moisture in soil. Soil air, soil temperature and soil organisms.

*Soil Treatment.*—Losses of moisture and plant food from the soil and how loss may be prevented. Weeds. Rotation of crops. Increasing moisture and plant food material by cultivation. Replacing lost food material by addition of manure. Object of manuring. How rubbish, cattle urine and dung may best be preserved as manure. Green manuring. Slow and quick acting manures. How to use manures. When to use a quick acting manure.

*Tillage.*—Necessity for tillage; advantages of deep tillage. Implements commonly used by the cultivator. The soil-turning plough; examples. Brief description of the working of one type of each of the following improved implements:—

a harrow, cultivator and a plough.

Advantages of using improved implement of tillage.

*How Government helps the farmer.*—The objects and methods of the Agricultural Department. Improved seed of wheat, rice, sugarcane, cotton, gram, fodders, etc., and where they may be obtained. Improved seed compared with seed in common use. Illustrations showing the actual money gain due to the use of improved seed. Improved implement of husbandry used on Government farms; seed-drills, reaping machines, cane-crushing machines, fodder-cutting machines, threshers and tractors, irrigation machinery. The chief crop pests; methods employed by the Agricultural Department to destroy them. General methods employed in farming on Government farms; lessons they teach to the rayat.

*Irrigation.*—The need of irrigation. Sources of water for irrigation. Economy of water. Brief, elementary comparisons of tubewells, Persian wheels and small water lifts such as the Baldeo balti and the beri or country basket. Dangers of over-irrigation. The canal system of the United Provinces. The work of the Irrigation Department.

#### CO-OPERATIVE SOCIETIES.

Capital required by cultivators. The small agriculturist has little credit, hence the interest he pays on borrowed money is high. The co-operative credit system, and its value to the cultivators. Why such a society can get money cheaply. Advantages of membership. How to become a member. How to obtain a loan. How profits are used. Encouragement of thrift. Central banks. Other kinds of co-operative societies.

*Cattle.*—Comparison of Indian with European cattle. Care of animals. Improvement of draught and milk cattle. Importance of

good milk. Methods employed by the Agricultural Department for the improvement of village cattle. The Hissar and Hansi breeds. The Delhi buffalo.

*Forests.*—The work of the Forest Department.

*Famines.*—How caused. Less to be feared now than formerly. Remedial measures.

*Sanitation.*—Cleanliness of the village. Pits for latrines. Water-supplies; how to keep well water pure and clean, danger of washing dirty clothes near well. Danger of flies, mosquitoes and unhealthy dogs. Disposal of dead bodies. The work of the Public Health Department.

*First Aid.*—Snake-bite, mad dog bite, cuts and wounds, burns, poisoning, bleeding, broken bones, drowning.

### The Village.

The panchayat. The work of the lambardar, patwari and watchman. The headman.

### The District Board.

Functions of the board. How members are elected. Work of the chairman. Activities of the board in relation to village life. How the money for the work of the board is obtained. How the funds of the board are spent. The education committee.

A. H. MACKENZIE, M.A., C.I.E.,  
*Director of Public Instruction,  
United Provinces.*

ALLAHABAD:

March 2, 1932.



## CURRICULUM FOR THE VERNACULAR TEACHERS' CERTIFICATE EXAMINATION, 1934.

(To be taught from July, 1932.)

### First year.

#### I.—LANGUAGE (HINDI WITH SANSKRIT OR URDU WITH PERSIAN).

##### (A) *Hindi with Sanskrit.*

###### (1) *Hindi Text-book.*—

Sahitya Sumananjali by Kaushal Kishor and S. N. Chaturvedi, published by Rai Sahib Lala Ram Dayal Agarwala, Allahabad. (Re. 1.)

###### (2) *Hindi Supplementary Reading.*—

(i) Hindi Sahitya ka Sankshipt Itihas (pages 1—61), by Shyam Sundar Das, Indian Press, Ltd., Allahabad. (10 annas.)

*For teachers' use.*—Hindi Sahitya ka Itihas, by Pandit Ram Chandra Shukul, published by Indian Press, Allahabad. (Rs. 4-8.)

(ii) Prathama-Lankar Nirupana, by Chandra Shekhara Shastri, published by Hindi Sahitya Sammelan, Allahabad. (2 annas.)

###### (3) *Hindi Grammar.*—

Madhyamik Vyakaran, by Pandit Kamta Prasad Guru, Indian Press, Ltd., Allahabad. (6 annas.)

###### (4) *Sanskrit Text and Grammar.*—

Sanskrit Path Pustakam, Part I, by Indian Press, Ltd., Allahabad. (7 annas.)

Half of Text and half of Grammar portions are to be taken in first year.

##### (B) *Urdu with Persian.*

###### (1) *Urdu Text-books.*—

Bahar-i-Adab, Part I, by Maulvi Muhammad Tahir Faruqi, published by University Publishing House, Agra. (12 annas.)

###### (2) *Urdu Supplementary Reading.*—

(i) Baharistan-i-Urdu, Part I, by Saiyid Zafar Hasan Asi, Amrohwi, published by Lala Ram Narain Lal, Katra Road, Allahabad. (8 annas.)

(ii) Baharistan-i-Urdu, Part II, by Saiyid Zafar Hasan Asi, Amrohwi, published by Lala Ram Narain Lal, Katra Road, Allahabad. (8 annas.)

NOTE.—First half of the two books only.

(3) *Urdu Grammar*.—

Asas-i-Urdu, by Saiyid Jalaluddin Ahmad Jafri, published by Anwar Ahmadi Press, Allahabad. (Re. 1.)

(4) *Persian Text and Grammar*.—

Persian course for first middle class, published by Rai Sahib Munshi Gulab Singh and Sons, Lahore. (2 annas 4 pies.)

(First half of Sifwatul-Masadar may be taught as an aid to acquiring an incidental knowledge of Persian.)

## II.—\*METHODS OF TEACHING LANGUAGE.

(1) Students should know the common methods employed in the early stages in teaching, reading and writing; they should have practised one of them. They should themselves make block letters, *murakkabat* in Urdu, *sanyukt* letters in Hindi, and test-cards of various sorts as aids in the teaching of reading. They should study how children can be usefully employed, with such aids, in teaching themselves while the master is otherwise engaged, e.g., the children can be employed in word-building, sentence-building, in filling in gaps in their test-cards, and giving answers to questions on the test-cards. The teaching of writing should begin when words and letters can be recognized by the children. In writing attention should be paid to the need for beginning with large letters; to the use of hygiene material and correct and healthy posture; suitable media for child beginners, e.g., sand, clay, seeds, etc.; the proper method of holding and manipulating the pen; and the care of pens, ink, and *takhtis*.

(2) After recognition of individual letters and words is achieved and the power of copying individual letters, *murakkabat*, *sanyukt* letters and words is acquired, later stages in the teaching of language are—

- (a) Clear, loud reading (i) for the sake of pronunciation of comprehension and (ii) for conveyance of written ideas to others (test; criticism of the reading by the class with books closed).
- (b) Silent reading as a chief means of acquiring knowledge. Practice by flash reading, and private reading in class by individuals and groups (tested by subsequent questioning), home-reading.
- (c) Dictation. The proper method of dictation and its correction. Aim; concentration and exact reproduction. Subsidiary aims; spelling and penmanship.
- (d) The teaching of penmanship as an art.

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\*The course in methods of teaching is a two-years course and should be covered partly in the first year and partly in the second year.

- (e) Composition and grammar. The cultivation of the power of correct expression by means of (i) oral work, e.g., discussion in class; dramatization of stories read; oral composition with special emphasis on the grammatical functions of words and phrases, (ii) written composition as a means of self-expression; the letter; the story; the description; the use of objects, pictures and familiar topics as a basis for composition. The essential importance of intelligent and intelligible self-expression as a correlating factor of all school activity, both in class-room and in playground.

The book *Tarik-ut-Talim Urdu*, by Suraj Narayan Mathur, Head Master, Government Normal School, Allahabad, published by the Delhi Printing Works, Delhi, is recommended for use by the pupil-teachers in learning the methods of teaching the Urdu alphabet.

The following books are also recommended for use :—

(1) *Bhasha Shiksha Uddesh*, by Rai Bahadur Lajja Shankar Jha, Principal, Training College, Benares.

(2) *Khamosh Mutala ki Pahili kitab*, by Sheikh Khadim Mohiuddin, M.E.D., published by Rai Sahib Gulab Singh and Sons, Lahore. (6 annas.)

### III.—METHODS OF TEACHING ARITHMETIC.

Students should possess a thorough knowledge of the methods of teaching the entire course prescribed in Arithmetic up to and including that for Class IV of Vernacular Schools with special attention to the aids in the early stages and the logical setting out of sums in the later stages.

The following syllabus is prescribed for the purpose :—

1. The aims in teaching Arithmetic (utilitarian and educational).
2. How to teach—
  - (1) Counting (The correct use of concrete aids).
  - (2) Grouping.
  - (3) Addition and subtraction with concrete aids. The use of the ball frame. Tables of addition. Abstraction from concrete.
  - (4) The written figures and notation. The use of signs. Building up of notation (practical and inexpensive devices).
  - (5) Multiplication and division.
  - (6) Measuring, weighing, and the use of money with simple concrete aids.

(7) Multiplication and division.

(8) The compound rules, fractional tables, factorization, vulgar fractions, simple interest, practice, account-keeping, and compound interest.

(9) Mental arithmetic (the importance of mental arithmetic in all particular reference to local subjects).

3. (1) The necessity for ascertaining the child's knowledge of number on admission and when the child has in the infant class reached definite stages of progress.

(2) The importance of cleanliness, neatness, legibility, accuracy, speed, and logical arrangement in the setting out of written work; the necessity of supervising rough work.

(3) The value of approximate answers and ingenious methods of calculation.

Books recommended for use—

Arithmetic, Shiksha Pranali, by Bhattacharya and Sukul (Hindi and Urdu) published by the Indian Press, Ltd., Allahabad. (Re. 0-12-0 each version.)

Books recommended for teachers' use—

Bahi Khata Shikshak, by Lakhpat Rai Sharma (Hindi), first edition, published by P. C. Dwadash Shreni & Co., Aligarh (price Re. 0-6-0.)

Muallim Bahi Khata, by Lakhpat Rai Sharma (Hindi), first edition, published by P. C. Dwadash Shreni & Co., Aligarh (price Re. 0-6-0.)

#### IV.—METHODS OF TEACHING HISTORY AND GEOGRAPHY.

(a) *History*.—From the earliest times to the reign of Aurangzeb.

(b) *Geography*.—The book recommended for use of teachers is :—Vernacular School Geographies (Urdu or Hindi), published by Longmans, Green & Co.

A.—How to teach the geography of the area round the school and Map-making and reading and use of books, then of the district, the province and India; simple plan and map-making and the proper study of district and provincial maps and the map of India.

NOTE.—Methods of open air instruction must receive particular attention; school excursions with the object of encouraging the boys to observe facts and absorb knowledge of a kind useful to a farmer should frequently be undertaken

#### *With Class II of the Model School.*

1. How to find direction by the sun and by the pole-star. The drawing of a compass card by class and teacher.

2. Measurement and estimation of distances by uncertain measures, *girah*, *hat*, *pace*, etc., measurement in standardized distances, inch, foot, yard, furlong. The use of the foot-rule. Practice in estimating by eye.

3. Reduction to simple scales.

4. How to fix on a horizontal blackboard the position of one object in relation to another by plotting direction and distance reduced to scale.

5. How to make a plan of an ink-pot, box, etc., by outlining the base by measurement without reduction and with reduction to a scale.

The plan of a house as shown by its foundations.

Plan of the class-room on blackground from the children's measurements and reductions and the teacher's plotting.

Finding positions in the room and on the plan.

Plan of school and exercises in finding positions.

#### *With Class III.*

1. Combination of map and plan, making a map of school environment. Exercises in reduction and enlargement of maps.

2. Plotting walk on slate, using pace as unit of measure and inserting objects by estimating rectangular distance from route by eye.

3. Reading map of district. Knowledge of signs. Measurements of map distances and calculations of actual distances (*a*) as crow flies, (*b*) along roads, railways, etc., from home village to various places such as the thana, the post office, the district headquarters. (This is the first exercise in visualizing what is beyond the actual horizon.)

4. Plotting walk, using signs on district map for woods, swamps, jheels, etc. Judging distances with the eye.

5. Exhibition of patwari's map and short explanation of its use.

NOTE.—In the beginning the use of a map should be taught outdoors with the map horizontal and orientated; directions should be taught from the point of the map representing the position of the student.

#### *With Class IV.*

1. Revision of map work, especially plotting.

2. Study of map of the United Provinces, as of district, with particular attention to physical features, communications and positions of the large towns in relation to communications and products of the surrounding country.

3. Study of the map of India.

4. Use of outline maps.

5. The use of pictures and maps as aids to the text.

B.—Observation work on landscapes on local differences of soil, etc., and their effect on vegetation; observation on means of transport, on local industries, on commerce, etc., on the habits of some animals and birds, on the seasons, the sun, moon, pole-star, etc. Making simple cheap apparatus from materials to hand, e.g., sun-dial and apparatus for demonstrating seasons and length of day and night.

Observation work.

*With Class II.*

1. Illustration in the rainy season of the following :—Lake, bay, or gulf, strait, island, cape, isthmus, peninsula. The simple study of water tunnels to show drainage, carrying and cutting power of water.

2. The trees round the school, their uses, the times of germinating, flowering, fruiting, and shedding of leaves.

The usual crops of the neighbourhood, times of sowing and harvest; suitability of location, supply of water by rainfall, canals, wells, tanks.

3. Local means of transport by land or water, human transport, beasts of burden, animal traction, mechanical transport.

4. Village and town industries, e.g., the potter, carpenter, spinner, weaver, blacksmith, rope-maker, cultivator, etc., and their tools, commodities in the market and where they come from.

5. Domestic animals and their usefulness to man.

6. Hours of sunrise and sunset, noonday shadows.

*With Class III.*

1. Recognition during the rains of lakes, capes, islands, etc. Comparison of maps with actual forms.

Further study of stream-source, stages, bed, tributaries, distributaries, delta, flood, plain, water-parting, catchment basin.

2. Different kinds of soil according to classification in patwari records. Uses of each soil as demonstrated in the neighbourhood, especially as regards pasture and cultivation. Use of patwari map to show distribution. Useful plants and noxious weeds in field and jheel.

3. Transport and communication-paths, *kachcha* and *pakka* roads, railways, tramways, navigable canals and rivers. The construction of roads, material, method, culverts, milestones, gradients, etc. Position of *abadi* in relation to roads. Road and rail communication within the district. How letters travel.

4. Industries and commerce of the district. Reasons for market on special days and special places, animal fairs within the district, e.g., Devi Patan (Gonda), Nauchandi (Meerut), Bateshwar (Agra). Permanent markets, Chauka, Mundia, mills and factories (if any). Why money is used? Coins and currency notes. The shop and shop-keeper. The *mahajan*, the *arhatia*, the *baya* (weighmen) and other persons of the market place.

5. Wild animals and birds of the immediate neighbourhood. Where they make their homes. The times of their daily appearance. Their habits so far as can be observed. Migration of birds.

6. How to read the time by the sun and by a clock.

#### *With Class IV.*

1. Comparison of actual landscapes and forms with representation on maps, study of mountains, hills, plateaux, passes, from nature, if possible, and from maps.

2. Study of railway by observation-station, permanent way, signals, rolling-stock, railway bridges, steam-boats, motor traffic, rivers.

3. Observation of any special industry, e.g., carpet-weaving (Mirzapur), dairy-farming (Aligarh).

4. Expansion of earlier work. Compilation, if possible, of a combined class diary.

5. Maintenance of seasonal time chart, recording weather conditions in combination with agricultural and other activities as observed by pupils and teachers.

The following books are recommended for study :—

1. Ram Narain Misra's Geography of India, Urdu and Hindi editions, published by Bhugol Karyalaya, Allahabad. (Rs. 2 each version.)

2. Fan-i-Talim, ( by Babu Gopi Lal Mathur, published by Param

3. Shiksha Vidhi, ( Hans Lal Mathur, mohalla Narhi, Lucknow. (Rs. 1-8 each version.)

## V.—SCHOOL AND CLASS MANAGEMENT AND ELEMENTARY PSYCHOLOGY.

(a) *Class-teaching and its principles and practice.*—General principles; the use of the voice; the use of language; questions; answers; explanations; illustrations, descriptions, the blackboard, notes of lessons; boys notes; exercises.

(b) The course in Elementary Psychology should be spread over the two years and should cover the following :—

The child; his instincts and activities; sense-training; observation; interest and attention; fatigue; association; imagination and memory; habits and their formation; the will; character.

Books recommended for use of teachers :—

1. *Nafsiyat-i-Talim*, by Muhammad Usman, Vice-Principal, Training College, Hyderabad (Deccan), published by the author. (Rs. 3.)

2. *School and class management in Urdu*, by Pandit Prem Ballabh Joshi, published by Indra Printing Works, Almora. (Rs. 2.)

3. *School and class management in Hindi*, by Pandit Sri Niwas Joshi, published by Indra Printing Works, Almora. (Rs. 2.)

## VI.—RURAL KNOWLEDGE.

## OUTLINE SYLLABUS FOR FIRST YEAR CLASS.

<i>Agriculture</i>	... The plant and how it grows. Air in connection with plant life. The atmosphere.
<i>Animal Life</i>	... Insects harmful and useful to man. The frog.
<i>Hygiene</i>	... The human body and how it works; cleanliness.
<i>Heat and Light</i>	... The thermometer; the magnifying glass; spectacles.
<i>The Village</i>	... The panchayat.
<i>The Postman</i>	... His work. How a letter is carried.
<i>The Policeman</i>	... His work. How to help the police.
<i>The Railway</i>	... Travelling by rail.
<i>Agriculture</i>	... The soil, soil treatment, tillage, irrigation. Work of the Agriculture and Irrigation Departments in relation to village life.
<i>Co-operative Societies</i>	... Their relation to agriculture.

## COURSE IN RURAL KNOWLEDGE.

### DETAILED SYLLABUS FOR FIRST YEAR CLASS

#### AGRICULTURE.

#### The Plant and how it grows.

*Introduction.*—The wonder, beauty and mystery of nature. Why plant life should be studied first. Part of a plant.

*Germination.*—The growth of bean and wheat seeds to be observed and compared. The manner in which the seedlings push their way through the soil to be noted and the different ways in which the roots grow. Conditions of germination. The depth at which seeds should be sown. Sowing seeds by a drill. To show by experiment that water, warmth and air are necessary for the growth of seeds.

*The Root.*—Tap and fibrous roots. Growth in length of the root. The root cap. Root hairs. To show by experiment how water is sucked into the roots. Absorption of water by roots; to be shown by using red ink.

*The Stem.*—The stem grows upwards and towards the light. Kinds of stems. The potato a swollen stem. To show by experiment how water passes up the stem. The work of the stem; to support leaves, to carry water and food taken up by the roots, to carry to different parts of the plant food made in the leaves by sunlight. Buds, and the places where they are found on branches.

*The Leaf.*—The veins, how arranged. Work of the leaves. Leaves give out water; to be shown by experiment. Air cooled by evaporation of water from leaves. Plants wither if roots, owing to injury, are unable to take in water. Care of roots when transplanting. How the leaf makes food. The leaf a food factory for the plant. The work of sunlight on the green stuff in leaves. Weeds cut off sunlight from young plants. Breathing of plants. To show by experiment that seeds and plants breathe.

*The Flower and Seed.*—The work of a plant; to ripen seeds. Parts of a flower. Fertilization. How pollen is carried by wind and insects. Development of the seeds. How seeds are scattered by wind, animals and water. Length of plant life.

#### The Atmosphere.

Empty vessels contain air. Hot air rises. Fire balloons rise with hot air. Air a mixture of gases. Experiment to show that only a portion of the air is used up when anything is burnt in it. The gas used up is oxygen; the gas left is nitrogen. Carbon dioxide gas is obtained when charcoal is burnt. Carbon dioxide gas in relation to

human and plant life. Plants purify air left impure by animals. Water vapour in the air; its amount usually less in the dry than in the rainy season. Test for carbon dioxide, using chalk. Blackboard chalk the same as white limestone. The breath contains carbon dioxide. Lime water turns milky when breath is blown into it.

### Animal Life.

*Insect Life.*—General description of an insect. Insects harmful and useful to man. The butterfly, its life history; the egg, caterpillar and pupa stages. Eggs to be collected and the development of the various stages watched. The mosquito, its life history. The mosquito, the carrier of the malaria germ. Breeding places. The housefly, its breeding habits and life history; a carrier of disease. The flea, its habits and its relation to plague. The bug and the louse.

*The Frog.*—Its life history, the egg and tadpole stages. Difference between a frog and a toad. Both friends of the farmer. Eggs or tadpoles to be collected and kept with water-plants in a large glass vessel. The development of the various stages to be watched.

### Hygiene.

*How to keep well.*—How a knowledge of the working of the different parts of the body will help.

*The Skeleton.*—Made up of a large number of bones. Strength of the bones. How to help the bones to grow straight and strong. How bones are joined together. What makes them move. The skull; protection for the brain. The backbone; made up of a number of bones. The position of the spinal cord. The spinal cord carries messages to and from the brain and to all parts of the body. The ribs the body's armour. The effect of food on the growth of bones. Value of games and exercises.

*What happens to the food we eat.*—Food should be chewed and mixed with saliva. Spitting a waste of saliva. The food pipe leads into the stomach. The use of the tongue while chewing. Food mixes with juices in the stomach, afterwards passing into the bowels where it is then absorbed. Waste matter should be got rid of daily.

*The Heart and its work.*—Position of the heart. The heart a pump with walls made of muscles. Arteries and veins. Circulation of the blood. Arteries carry pure blood and veins impure blood. Heart beats. The blood. Red and white cells and the work they do. Bad air and alcohol hinder the work of the blood cells. Temperature of the body in illness and in health.

*The Lungs and their work.*—Air necessary for life. The windpipe. Position of the lungs. How the lungs draw in air. Fresh air necessary for a healthy life. Why we should breathe through the nose. The voice-box.

*The Skin*.—Work of the pores. Why the skin should be kept clean.

*The Teeth*.—Use of the teeth. Why they should be kept clean.

Books recommended for the use of teachers :—

- (1) *Manual of Hygiene*, by Charles Banks. (Macmillan & Co.)
- (2) *Tandursti-ki-Pahli Kitab*, by Colonel J. W. D. Megaw, Indian Red Cross Society, Viceregal Lodge, Delhi, price Re. 0-12-0.
- (3) *Swastha Raksha-ke-Prathemic Niyama* (the Hindi version of Colonel J. W. D. Megaw's *First Laws of Health*), Indian Red Cross Society, Viceregal Lodge, Delhi, price Re. 0-12-0.
- (4) *Sehat-ki-Kahani*, by E. Marsden, B.A., translated into Urdu by Munshi Abid Hasan Faridi, published by Macmillan & Co., price Re. 1.
- (5) Hindi translation of the *Land of Health and the Land of Wealth*, by Pandit Ram Narayan Misra, published by Macmillan & Co., price Re. 1.
- (6) *Longmans' Physiology, Hygiene and First Aid to the injured* (Hindi or Urdu), published by Longmans, Green & Co., Ltd., Calcutta, price Re. 1-8-0 each.

*First Aid*.—The student should take the St. John Ambulance Certificate Examination.

#### Heat and Light.

*The Thermometer*.—Expansion of water. A large narrow-necked bottle full of water is placed in the sun; the water when hot overflows. Expansion of a liquid to show when a body is hot or cold. The thermometer. Temperature of the body rises during fever.

*The Magnifying Glass*.—Light travels in straight lines. Reflection in a mirror. When light rays travel through a lens they are bent. The burning glass. The magnifying glass makes things look larger than they really are. Spectacles. How to tell if you have bad sight.

#### The Village.

The panchayat. The work of the lambardar, patwari and watchman. The headman.

#### The Postman.

The work of the postman. How a letter is carried. Registered letters. Postage rates. How to send money through the post office. Post Office Savings Banks. Cash Certificates. The Telegraph. How to send a telegram.

**The Police.**

The work of the police. How to help the police. Additional police.

**The Railway.**

Travelling in India before railways were developed. Advantages of railways to India. Railways provide work for many people. What makes the engine move. The use of signals; red and green lights. Travelling by train. Sending a parcel by train. Cost of sending a parcel by passenger and goods trains.

**AGRICULTURE.**

*Introduction.*—Agriculture the main occupation of India; Proportion of population engaged in agriculture. Kinds of farming; cattle grazing and where it is best practised; sheep farming; goat farming. General agriculture. Reasons why the soil in India is poor compared with that of other civilised countries. Comparison of the yield of land in India with the yield of land in other countries. Rainfall and climate; how they determine the kinds of farming.

*The Soil.*—How formed. The sub-soil. Heavy, light and medium soils. The value of lime and humus. Excess and deficiency of moisture in soil. Soil air, soil temperature and soil organisms.

*Soil Treatment.*—Losses of moisture and plant food from the soil and how loss may be prevented. Weeds. Rotation of crops. Increasing moisture and plant food material by cultivation. Replacing lost food material by addition of manure. Object of manuring. How rubbish, cattle urine and dung may best be preserved as manure. Green manuring. Slow and quick acting manures. How to use manures. When to use a quick acting manure.

*Tillage.*—Necessity for tillage; advantages of deep tillage. Implements commonly used by the cultivator. The soil-turning plough; examples. Brief description of the working of one type of each of the following improved implements:—

a harrow, cultivator and a plough.

Advantages of using improved implements of tillage.

*How Government helps the farmer.*—The objects and methods of the Agricultural Department. Improved seed of wheat, rice, sugarcane, cotton, gram, fodders, etc., and where they may be obtained. Improved seed compared with seed in common use. Illustrations showing the actual money gain due to the use of improved seed. Improved implement of husbandry used on Government farms; seed-drills, reaping machines. cane-crushing machines, fodder-cutting machines, threshers

and tractors, irrigation machinery. The chief crop pests; methods employed by the Agricultural Department to destroy them. General methods employed in farming on Government farms; lessons they teach to the rayat.

*Irrigation.*—The need of irrigation. Sources of water for irrigation. Economy of water. Brief, elementary comparisons of tube-wells, Persian wheels and small water lifts such as the Baldeo balti and the beri or country basket. Dangers of over-irrigation. The canal system of the United Provinces. The work of the Irrigation Department.

#### Co-operative Societies.

Capital required by cultivators. The small agriculturist has little credit, hence the interest he pays on borrowed money is high. The co-operative credit system, and its value to the cultivators. Why such a society can get money cheaply. Advantages of membership. How to become a member. How to obtain a loan. How profits are used. Encouragement of thrift. Central banks. Other kinds of co-operative societies.

*Text-Book.*—Rural knowledge for vernacular middle schools (Urdu or Hindi), published by Rai Sahib Ram Dayal Agarwala, Allahabad, Book I and half of Book II. (Book I—3 annas. Book II—4 annas).

#### VII.—DRAWING.

##### Stage I—

- A.—The Circle ... Turned objects having a circular outline, as a plate coin, hoop, wheel, clock-face, sun, moon, etc.
- B.—Modifications of circle Orange, apple, *ghara*, football, pomegranate.

##### Stage II—

- A.—The ellipse ... Circular objects seen in perspective become ellipses; plate, coin, hoop, clock-face, rim of a vessel, etc. Also felt cap, spectacle glass, etc.
- B.—Modifications of the ellipse. Egg, guava, brinjal, *papita*, jackfruit, gourd, cocoanut, pear, etc.

##### Stage III.—Simple straight-lined objects—

- A.—Right-angled ... Envelope, table-top, doorwindow, box-top, blackboard, etc.
- B.—Modifications ... Flag, *takhti*, T-square, map, etc.
- C.—Perspective ... Any of the above classes of objects seen in perspective.

NOTE.—The method to be adopted in teaching the subject is given below.

### Method.

The examination test is drawing on the blackboard only, but to enable students to pass this test they should be trained in the principles of object-drawing by means of work on paper and subsequently apply these principles to instruction of a class from the blackboard.

As it is a teacher's course the method to be adopted should be that of drawing on the blackboard to a large scale, i.e. three feet in each direction, as being a convenient stretch for the arm, and the drawing being then within the compass of the eye as seen by the teacher and yet large enough to be seen by the pupils at a distance of twenty feet. The drawing should be executed in as free a manner as possible, the arm being straight but flexible, and the teacher standing not less than two feet from the blackboard.

The principal aim of the drawing to be taught later is to furnish an illustrated class record of the study of the character, etc., of the things seen by the scholars in their object lessons. Thus it is necessary that the drawing should also be done in books so as to be available for future reference.

These drawings should be free in character and when possible, should be of the same size as the original; but if this is not possible, the scale of the enlargement or reduction should be stated below the drawing.

The standard of excellence in the drawing should not be that which shows the most neatly-executed outline drawing of the subject studied but rather that which most clearly conveys or records the point or points brought out in the lesson given.

It will be advisable, therefore, for the teacher (as well as his pupils) to combine his drawing lesson with his object lesson, and, to ensure this the object lessons and drawing lessons should, if possible, be consecutive periods.

The method to be adopted when teaching this subject in the Vernacular Schools would be that in the object lesson the teacher will draw attention to certain facts and impress them on the minds of his pupils by large sketches on the blackboard. These should be carefully copied in their books or other drawings should be made by the pupils themselves from the object under study.

This principle should also be adopted in the teacher's study, but it will be expected that his resulting drawings will show more searching observation and be executed so as to record best the character of the object under study and to impress most clearly upon the point illustrated.

The drawings on the blackboard (if in outline only) should be drawn with white chalk, but if representation of solid things be attempted in

a solid way, they should be drawn with coloured chalks in as nearly the true colours as possible.

Sometimes where it is found difficult to make a true rendering on a black surface, a large sheet of brown or white paper should be used for chalk and charcoal work.

For work in books an HB pencil will usually be found sufficient.

In drawing fruits, sectional drawings will be of great advantage.

In all possible cases drawings should be executed without the aid of guiding lines, and even when necessary very few guiding lines should be used.

#### VIII.—PHYSICAL EXERCISES.

All students, should take part in games regularly. Students should change their clothes for games. A banian and shorts are recommended.

Secuting should be encouraged. The following exercises are given in (a) Kempster and Kaye's Physical Drill in Urdu and Hindi (Macmillan & Co.) should be done with special reference to teaching the course prescribed for primary schools and with the reasons for the various exercises :—

Chapters I to III.—The whole.

Chapter IV.—The whole (optional), races, jumps, and tug-of-war.

(b) Football, volley ball, gymnastics, wrestling, and other Indian games should be played.

or

The new course of Physical Training as given in Appendix I. This course is taught in Normal Schools, Allahabad, Lucknow, and Agra, and may be taught in other Normal Schools where facilities for teaching the course exist.

#### IX.—MANUAL TRAINING. [NORMAL SCHOOL, ALLAHABAD.]

The course in Manual Training is given in appendix II.

#### Second year.

##### I.—LANGUAGE (HINDI WITH SANSKRIT OR URDU WITH PERSIAN.)

##### (A) *Hindi with Sanskrit.*

##### 1. *Hindi Text-book.*—

Sahitya-Summananjali, by K. Kishor and S. N. Chaturvedi, published by Rai Sahib Lala Ram Dayal Agarwala, Allahabad. (Re. 1.)

##### 2. *Hindi Supplementary Reading.*—

(i) Hindi Sahitya ka Sankshipt Itihas (pages 62—170), by Sham Sundar Das, Indian Press, Ltd., Allahabad. (10 annas.)

(ii) *Rachna-darsh*, by Chaturvedi Dwarka Prasad Sharma, published by Rai Sahib M. Gulab Singh and Sons, Lahore. (8 annas.)

(iii) *Pingal Prabodh*, (pages 1—88), by Jyoti Prasad Misra, published by Hindi Press, Allahabad. (6 annas.)

### 3. *Hindi Grammar*.—

*Madyamik Vyakaran*, by Pandit Kamta Prasad Guru, Indian Press, Ltd., Allahabad. (6 annas.)

### 4. *Sanskrit*.—

*Sanskrit Path Pustakam*, Part I, (pages 26—48), by Indian Press, Ltd., Allahabad. (7 annas) (The remaining portions.)

## (B) *Urdu with Persian*.

### 1. *Urdu Text book*.—

*Bahar-i-Adab*, Part II, by Maulvi Muhammad Tahir Faruki, published by University Publishing House, Agra. (12 annas.)

### 2. *Urdu Supplementary Reading*.—

(i) *Baharistan-i-Urdu*, Part I, by Saiyid Zafar Hasan Asi, Amrohwi, published by Lala Ram Narain Lal, Katra Road, Allahabad. (8 annas.)

(ii) *Baharistan-i-Urdu*, Part II, by Saiyid Zafar Hasan Asi, Amrohwi, published by Lala Ram Narain Lal, Katra, Road, Allahabad. (8 annas.)

NOTE.—Second half of the two books only.

### 3. *Urdu Grammar*.—

*Asas-i-Urdu*, by Saiyid Jalal Uddin Ahmad Jafri, published by Anwar Ahmadi Press, Allahabad. (Re. 1.)

### 4. *Persian*.—

*Persian Course for first Middle Class*, published by Rai Sahib M. Gulab Singh and Sons, Lahore. (2 annas 4 pies) (Second half of *Sifwatul Musadir* may be taught as an aid to acquiring an incidental knowledge of Persian.)

## II.—METHODS OF TEACHING LANGUAGE.

(See first year course.)

## III.—METHODS OF TEACHING MATHEMATICS.

(a) Revision of the Vernacular Final Examination Course and the First-year course with special reference to the following :—

- (1) Oral work.
- (2) Neatness, legibility, accuracy, speed and logical arrangement in the setting out of written work.
- (3) Exercises of Geometary, Theoretical and Practical.

(b) *Arithmetic*.—Contracted methods in the four rules in decimals.

(c) *Algebra*.—Use of symbols, substitution, negative quantities, Four simple rules. Use of brackets. Solution of easy problems involving one unknown quantity. Simultaneous equations with easy problems.

*Text-book.*—Ibtadai Algebra in Urdu, and Viiganit, Parveshika in Hindi, 1930 edition, by Shri Newas Joshi, published by the Indra Printing Works, Almora. (Annas 12 each version, bound.)

NOTE.—The teaching of simple account peeping (khata and roznamcha) should be practised.

#### IV.—METHODS OF TEACHING HISTORY AND GEOGRAPHY.

(a) *History.*—From the death of Aurangzeb to the death of Queen Victoria.

(c) *Geography.*—Revision of the First-year course.

In extension of the knowledge of the subject—

(a) The study of Geography as prescribed for Anglo-Vernacular Schools up to and including Class VIII, special attention being given to chapters dealing with the Physical Geography and Cartography.

(b) A knowledge of the meaning of a "natural region" and of the distribution of the major natural regions according to Dr. Herbertson.

The following is recommended for use in normal schools :—

Phillip's Comparative Wall Atlas of the Indian Empire consisting of—

- (1) Relief of Land Communication (7s.)
- (2) Climate : Winter Conditions (7s.)
- (3) Climate : Summer Conditions (7s.)
- (4) Actual Temperature, January (7s.)
- (5) Actual Temperature, June (7s.)
- (6) Political Divisions and Communications (7s.)
- (7) Density of Population and Languages (7s.)
- (8) Commercial Development (7s.)

(mounted on cloth and dissected to fold with metal eyelets for hanging).

The price of a set of eight maps, mounted on cloth to fold, dissected and eyeleted, in cloth case, size 15 by 12 inches, with handbook, is 47s. 6d. net.

The price of a set of eight maps mounted on cloth as a wall atlas, on roller, with handbook, is 40s. net.

The following books are recommended for study :—

1. Ram Narain Misra's Geography of India, Urdu and Hindi editions, published by Bhugol Karyalaya, Allahabad. (Rs. 2 each edition.)
2. Fan-i-Talim, { by Babu Gopi Lal Mathur, published by Param
3. Shiksha Vidhi { Hans Lal Mathur, mohalla Narhi, Lucknow. (Rs. 1-8 each version.)

## V.—SCHOOL AND CLASS MANAGEMENT, AND ELEMENTARY PSYCHOLOGY.

*Revision of the First-year course, and (a) School Management.*—

(i) The Head Master, his duties of supervision of the work of other classes, curricula; the classification of pupils; examinations; compilation and arrangement of time-tables; use of library; maintenance of material of instruction, and its use; recruitment of new boys and their introduction to the new environments; Home work, parental co-operation, corporate life, the hostel, games, discipline. The rules in the Educational Code. The District Board Rules. Maintenance of registers.

(ii) Class teaching and its principles and practice. Qualifications of an ideal teacher or, general principles of teaching, the relation of play and work, the management of combined classes and groups.

Books recommended for the use of teachers—

- (1) Instruction in Indian Secondary Schools, by A. H. Mackenzie.
- (2) The Students' Guide, Professor John Adams, published by the London University Press.
- (3) Modern Developments in Educational Practice, Professor John Adams, published by the London University Press.
- (4) The New Teaching, Professor John Adams, published by the London University Press.
- (5) The Play Way, Caldwell Cooke.
- (6) School and Class Management in Urdu, by Pandit Prem Ballabh Joshi, published by Indra Printing Works, Almora. (Rs. 2.)
- (7) School and Class Management in Hindi, by Pandit Sri Niwas Joshi, published by Indra Printing Works, Almora. (Rs. 2.)

(b) *Elementary psychology.*—See first year course.

## VI.—RURAL KNOWLEDGE.

## OUTLINE SYLLABUS FOR SECOND YEAR CLASS.

<i>Hygiene</i>	... Disease, sanitation, food and water. Work of the Public Health Department.
<i>The District Board</i>	... The Board's work. The education committee.
<i>Agriculture</i>	... Propagation of fruit trees, Care of animals. Cattle breeding. Work of the Veterinary and Forest Departments. Famines.

*Hygiene*

First aid.

*How the country is governed* The executive, judiciary and legislature.

Landlord and tenant.

Tenancy law.

*How Government obtains and spends money.*

*Education.*

DETAILED SYLLABUS FOR SECOND YEAR CLASS.

**Hygiene.**

*Diseases.*—Infectious diseases caused by germs. How diseases are spread by water and insects. Causes, diagnosis, remedial and preventive measures for cholera, malaria, plague, tuberculosis, small-pox, hook-worm and leprosy.

*Personal and Domestic Hygiene.*—Cleanliness of the skin, fingers, eyes, ears, hair, teeth. Clothing and shoes. Exercise and fresh air. Ventilation and general cleanliness of the house. Storage of food and water in the house. Diet. Value of milk for babies and young children. Danger of eating overripe fruits.

*Sanitation.*—Cleanliness of the village. Pits for latrines. Water-supplies; how to keep well water pure and clean, danger of washing dirty clothes near wells. Danger of flies, mosquitoes and unhealthy dogs. Disposal of dead bodies. The Work of the Public Health Department.

**The District Board.**

Functions of the board. How members are elected. Work of the chairman. Activities of the board in relation to village life. How the money for the work of the board is obtained. How the funds of the board are spent. The education committee.

(NOTE.—Little plays should be arranged by the teacher in connexion with the above subjects on Hygiene, each boy, as far as possible, should take his turn in acting a part).

**AGRICULTURE.**

*Trees.*—Propagation of trees, layering, gootee, budding, grafting, inarching, pruning. Watering of trees.

*Cattle.*—Comparison of Indian with European cattle. Care of animals. Improvement of draught and milk cattle. Importance of good milk. Methods employed by the Agricultural Department for the improvement of village cattle. The Hissar and Hansi breeds. The Delhi buffalo.

*Forests.*—The work of the Forest Department.

*Famines.*—How caused. Less to be feared now than formerly. Remedial measures.

**Hygiene.**

How we can help our friends. Simple rules about common infectious diseases. Care of the sick; food for sick persons.

*First Aid.*—Snake-bite, mad dog bite, cuts and wounds, burns, poisoning, bleeding, broken bones, drowning.

**How the country is governed.**

The district as the administrative unit. The district officer, the superintendent of police, the engineer, the forest officer; their work and the work of their subordinates. The province divided into a number of districts. The Commissioner and his work. The Government. The Governor. The Government of India. The Viceroy. The Legislative Council. Its work. How members are elected. How to vote. The Judiciary. The Zamindari system of the United Provinces, Tenancy Law.

**How Government obtains and spends money.**

The land revenue. Work of the settlement officers. How the revenue is collected. Taxes. Why we pay them. Provincial income—excise, stamp, forest, irrigation. Imperial income—salt tax, amount per seer of salt, income-tax, opium, customs. How the money is spent by the Provincial Government:—law and order, education, medical work and sanitation, agriculture, veterinary work, irrigation, co-operative societies, communications, grants to local bodies. Expenditure of the Government of India—defence, internal and external. The need of the army and the police.

**Education.**

Its value, its development in the United Provinces; the education of girls.

*Text-Book.*—Rural Knowledge for Vernacular Middle Schools (Urdu or Hindī), published by Rai Sahib, Ram Dayal, Agarwala, Allahabad.

Book II—(Half the book) and Book III. (Book II 4 annas each version.)

**VII.—DRAWING.**

Revision of the First-year course in Drawing, and as in the Syllabus given below:—

**(1) Curves and straight lines—**

- |                            |     |  |
|----------------------------|-----|--|
| A. Combined                | ... | Kite, spoon, how, dumb-bell, Indian club, spectacles, tennis racket, wheel, etc. |
| B. As seen in perspective. |     | Thimble, tumbler, bottle, <i>balti</i> , drum, etc.                              |

(2) A. Drawings of leaves in outlines as type shapes. As set out in section 5 of the scheme of Object Lessons For Class III of Vernacular Schools.

B. Drawing above in perspective. Care is to be taken to see that all leaves are copied when in positions similar to those in which they grow. Simple leaves should be drawn first, then those more complicated in form.

Book of reference Art Drawing for Indian Schools by J. Y. Buchanan, Macmillan & Co., price Rs. 4-8-0.

(3) Memory Drawing.

NOTE—The method to be adopted in teaching the subject is given in the first year course.

#### VIII.—PHYSICAL EXERCISES.

(1) The exercises taught in Vernacular Middle Schools with reasons for the various exercises.

(2) Infants' and boys' games which do not require apparatus.

Book recommended for use—

Urdu or Hindi version of "Physical Training," by Kempster and Kaye (Macmillan & Co.), price Re. 1 each,

or

The new course of Physical Training as given in appendix I. This course is taught in Normal Schools, Allahabad, Lucknow, and Agra, and may be taught in other Normal Schools where facilities for teaching the course exist.

#### IX.—MANUAL TRAINING. [NORMAL SCHOOL, ALLAHABAD].

The course in Manual Training is given in appendix II.

# APPENDIX I.

## *Syllabus of Physical Training for Normal School pupil teachers.*

Besides the following syllabus the pupil teachers should be given sufficient practice in commanding and taking classes in Physical Training.

### *Order Exercises.*

File arrangement; arrangement in teams or groups; turning with a jump; turning in two counts; taking distance in file arrangement; turning about; numbering in twos; stepping sideways and forward; taking double arm distance in rank arrangement; opening up files; closing up files; right form; left form; forming quad on the left or right (at the halt or on the march); and orderly dismissal.

### *Leg Exercises.*

Standing, foot closing and opening (teacher counting or class counting).

Standing, foot closing and opening with arm bending.

Standing, foot closing and opening with arm bending across.

Standing, toe placing forwards, sideways and backwards.

Standing, toe placing forwards, sideways and backwards with arm raising sideways.

Standing, foot placing astride with a jump.

Wing standing, foot placing astride with a jump.

Standing, foot placing astride with a jump with arms swinging sideways.

Standing, heel raising and lowering.

Bend standing, heel raising and lowering with arms stretching sideways.

Wing standing, heel raising with knee bending.

Wing standing, lunging forward.

Wing standing, toe placing backward in lunge position.

Crouch standing, jumping astride.

Crouch standing alternate leg stretching sideways.

### *Neck Exercises.*

Standing, head pressing backward.

Standing, head turning sideways.

Standing, head pressing backwards with fists turning outwards.

Standing, head rolling.

Back lying, head raising forward.

*Arm Exercises.*

Arm positions.

Wing, bend, yard, stretch, reach, across bend, head rest, neck rest.

Bend standing, arm stretching sideways, forwards and upwards.

Across bend standing, arm flinging.

Astride standing, free arms swinging to low cross position back to yard position.

Stretch standing, arms swinging downward and backward.

Bend standing, arm punching upwards.

Bend standing, arm punching forwards.

Standing, elbow circling.

Prone falling, arm bending.

*Lateral Exercises.*

Game like forms, e.g., "Sawing wood".

Wing standing, trunk turning sideways.

Wing kneeling, trunk turning sideways.

Wing astride standing, trunk bending sideways.

Astride standing, trunk bending downward with single arm circling forward to touch opposite toe.

Rest astride standing, trunk bending sideways.

Astride across bend standing, trunk turning sideways, with alternate arm flinging.

Astride yard standing, trunk turning sideways with arms swinging.

Prone kneeling, trunk turning with alternate arm swinging.

*Abdominal Exercises.*

Wheel barrows.

Yard back lying, single, or double knee raising.

Yard back lying, trunk bending upward or forward to grasp ankle.

Ring back lying, trunk bending forward.

Crouch position, knee stretching and trunk bending downward.

Neck rest astride lean standing, trunk bending downward.

Long sitting, trunk bending backward with support.

Stretch back lying, sitting upright to touch toes.

Kneel standing, trunk bending backward.

*Balance Exercises.*

Hop fight with folded arms.

Standing, marking time with high knee raising.

Wing standing, alternate knee raising, stretching, bending and lowering.

Standing, knee raising with arm raising sideways.

Wing standing, alternate leg swinging forward, sideways and backward.

Steady marching with high knee raising.

*Dorsal Exercises.*

Rest back lying, chest lifting.  
Prone lying, trunk bending backwards.  
Stretch astride standing, trunk bending backwards.  
Neck rest astride standing, trunk bending backward with support.  
Long sitting, both arm circling with support.

*Marching and Running.*

Quick march with halt.  
Marching on the spot with stamp in time.  
Marching with stamp and hand clap.  
Running on the spot.  
Toe marching.  
Sideways march on toes.  
Marching with changing step.  
Skip running.  
Endurance run.

*Games.*

Twos and Threes.  
Various kinds of tag games.  
Crows and Cranes.  
Relay Races.  
Storm the castle.  
Dog and Bone.  
Rooster Fight.  
Tails.  
Leg Wrestling.  
Tunnels.  
Skinning the Snake.  
Mounted Wrestling.  
Ben Hur Race.  
Follow the Leader.

*Agility Exercises.*

Hand standing with support and without support.  
Hand standing.  
Hand spring over a back.  
Hand spring free form.  
Cart wheels.  
Frog jumps.

*Breathing Exercises.*

Deep breathing with fist turning outward.  
Deep breathing with heel raising and arm raising sideways.  
Reach standing deep breathing and arm parting and heel raising  
etc.

## APPENDIX II.

*A two years syllabus of work in Manual Training (wood work) for Normal Schools.*

I. *Drawing*.—(a) A few preliminary exercises in order to understand the various views of models and the use of Drawing Board, T Square, Set Square, Ruler, and Divider.

*Text-Book*.—“Gills’ New School of Art Geometry.”

Plans and Elevations of solids in simple positions standing on the horizontal plane, page 120, problem 294 to 305.

(b) Drawing in plan, elevation and side view of all models in the course and in conventional Isometric projection of those of a rectangular shape.

Sketches will be made of all tools used in the course.

*Course in* :—

### II. *Wood Work*.—

1. Preliminary Planing.
2. Preliminary gauging.
3. Rectangular Prism.
4. Rectangular Prism with saw cuts.
5. Rectangular Prism with oblique saw cuts.
6. Chiselling exercises Pattern (a).
7. Chiselling exercises Pattern (b).
8. Chiselling exercises Pattern (c).
9. Prism with inlaid pieces.
10. Prism with Chamfered edges.
11. Gharonchi.
12. Chirag Dan.
13. Ruler.
14. Inkstand.
15. Frame.
16. Box.

The following joints should be included among the models :—

1. Half lapped joint.
2. Housing joint.
3. Mortise and tenon joint.
4. Dove tailed joint.
5. Bridle joint.
6. Tongue and Butt joint.

III.—*Care of Tools*.—Lectures will be given on the construction and maintenance of tools in good working condition including their setting and sharpening.

IV. *Theory*.—Lectures on the following subjects :—

- I. Timber—Its structure and growth.
- II. Timber—Its felling, seasoning, shrinkage, and defects
- III. Timber—Its chief kinds, properties and uses.

Chief kinds of timber :—

Shisham, Mango, Teak, Tin, Haldu, Nim, Chambeli, Deodar and Kail.

IV. Decay of timber and means of preventing it.

A. H. MACKENZIE, M.A., C.I.E.,  
*Director of Public Instruction,*  
*United Provinces*

ALLAHABAD :  
March 3, 1932.

**Curriculum for the Middle Section of Anglo-Vernacular Boys'  
and Girls' Schools, United Provinces, for 1932-33.**

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**PREFATORY MEMORANDUM.**

Head Masters, Head Mistresses and Managers of Secondary English Schools are permitted, in conformity with the general principles that underlie the curriculum, to make modifications in the distribution according to classes of the work in any subject. Permission is also given to re-group scholars in classes above the primary stage for the various subjects, independently of the recognized classification.

Subjects, other than English, are to be taught in the student's own language, but English technical terms and figures may be used.



Curriculum for the Middle Section of Anglo-Vernacular Boys' and Girls' Schools for the session beginning in July, 1932

**SUBJECTS OF STUDY FOR BOYS.**

**LOWER MIDDLE SECTION.**

**Classes V and VI.**

*Two years' course.*

1. English.
2. Hindi or Urdu.
3. Arithmetic.
4. History (stories) and Geography.
5. Drawing and Handwork.
3. Physical Training and Hygiene.
7. Elementary Science including Nature Study (where there are facilities).
8. Music (where there are facilities).

**UPPER MIDDLE SECTION.**

**Classes VII and VIII.**

*Two years' course.*

1. English.
2. Hindi or Urdu.
3. Mathematics (Arithmetic, Algebra and Geometry).
4. History.
5. Geography.
6. One of the following subjects :—
  - (i) Drawing and Handwork.
  - (ii) A Classical Language (Sanskrit, Arabic or Persian).
7. Physical Training and Hygiene.
8. Elementary Science including Nature Study (where there are facilities).
9. Music (where there are facilities).

NOTE.—The teaching of the second form of Urdu and Hindi to the Middle Classes should be continued as hitherto, the details being left to the discretion of heads of institutions.

**SUBJECTS OF STUDY FOR GIRLS.**

**LOWER MIDDLE SECTION:**

**Classes V and VI.**

*Two years' course.*

1. English.
2. Hindi or Urdu.
3. Arithmetic.
4. History (stories) and Geography.
5. Domestic Science (Simple Physiology, Hygiene and \*Sewing).
6. (a) Callisthenics.  
(b) Music (where there are facilities).
7. One of the following subjects (where facilities are provided) :—
  - (i) Drawing with or without Brushwork.
  - (ii) A Second Vernacular (Hindi or Urdu).
  - (iii) Nature Study (mainly gardening).

**UPPER MIDDLE SECTION.**

**Classes VII and VIII.**

*Two years' course.*

1. English.
2. Hindi or Urdu.
3. Mathematics (Arithmetic, Algebra and Geometry).
4. History and Geography.
5. Domestic Science (Simple Physiology, Hygiene and \*Sewing).
6. (a) Callisthenics.  
(b) Music (where there are facilities).
7. One of the following subjects :—
  - (i) A Classical Language (Sanskrit, Arabic or Persian).
  - (ii) Drawing with or without Brushwork.
  - (iii) Elementary Science including Nature Study.

\*NOTE.—Cooking and Spinning are additional subjects which should be encouraged, but they are not compulsory.

## SYLLABUS OF THE COURSES IN ENGLISH.

### LOWER MIDDLE SECTION.

#### Class V.

(Same for boys and girls.)

*Conversation, reading and recitation.*—To carry on simple conversation in English; to read with correct pronunciation from a reader; to use the words of the reader in simple sentences; to answer in English questions based on the matter in the reader; to recite simple poems with action.

*Dictation and writing.*—Dictation, in ruled books, of words and sentences previously read in the reader; writing in copy-books; transcription from the reader.

*Grammar and composition.*—Parts of speech without sub-classification, number and gender of nouns and pronouns; the use of the three simple tenses. Oral and written exercises on the above.

*Written composition.*—E.g., using the words and phrases of the reader in simple sentences; description of pictures and objects.

#### Text-book prescribed:—

(1) The Revised Modern India Readers, Book II (Macmillan and Company, Limited), annas 6,

or

(2) Third Direct Method English Reader, by Llewelyn Tipping (Macmillan and Company, Limited), annas 10,

or

(3) New English Course for Indian Schools, second year reading book (Longmans, Green and Company),

or

(4) Indian Class Reader, II, by P. C. Wren (K. and J. Cooper, Bombay),

or

(5) Nelson's Indian Reader, Book II (Thomas Nelson and Sons), cloth-binding annas 13, paper-binding annas 9 pies 6,

or

(6) New Indian Empire Readers, second (Blackie and Son, Ltd.), annas 6.

#### Recommended for supplementary reading:—

(1) The "A.L." Bright Story Readers, Grade P (E. J. Arnold and Son, Limited),

or

(2) Young India Readers, Grade II, Padmini and the Forest King (Oxford University Press),

or

(3) Indian Press Story Readers, Grade I, Happy Tales (Indian Press, Ltd., Allahabad),

or

(4) The First Book of Fables (First Grade), (Oxford University Press), annas 9.

#### Class VI.

(Same for boys and girls, subject to the modification noted below.)

*Conversation, reading and recitation.*—To carry on simple conversation in English; to read with correct pronunciation from a reader; to use the words of the reader in simple sentences; to answer in English questions based on the matter in the reader; to recite from memory passages chosen from the reader.

*Dictation and writing.*—Dictation, in ruled books, of passages chosen chiefly from the reader; writing in copy-books or transcription from the reader.

*Grammar and composition.*—Revision of previous work in grammar; nouns in apposition; sub-classification of nouns, pronouns, adjectives and adverbs; cases of nouns and pronouns; direct and indirect objects; verbs, numbers and persons, transitive and intransitive; participles; use of tenses; analysis of simple sentences. Oral and written exercises on the above.

*Written composition.*—E.g., the use of the words and phrases of the reader in simple sentences; reproduction of simple stories; practice in answering easy questions on the subject matter of the text; description of pictures and objects; punctuation.

(For girls the sub-classification of nouns, pronouns, adjectives and adverbs under "Grammar and composition" may be omitted.)

#### Text-book prescribed :—

(1) The Revised Modern India Readers, Book III (Macmillan and Company, Limited), annas 8,

or

(2) Fourth Direct Method English Reader, by Llewelyn Tipping (Macmillan and Company, Limited), annas 14,

or

(3) New English Course for Indian Schools, third year reading book (Longmans, Green and Company),

or

(4) Indian Class Reader, III, by P. C. Wren (K. and J. Cooper, Bombay),

or

(5) Nelson's Indian Reader, Book III (Thomas Nelson and Sons). Cloth-binding annas 14, paper-binding annas 10 pies 6,

or

(6) New Indian Empire Readers, third (Blackie and Son, Ltd.), annas 8.

**Recommended for supplementary reading:—**

(1) The "A. L." Bright Story Readers, Grade I (E. J. Arnold and Son, Limited),

or

(2) Young India Readers, Grades I and II (Oxford University Press),

or

(3) The New Method Readers (new series), Supplementary Reader I, by Michael West (Longmans Green and Company).

or

(4) Fables from Aesop, by Dorothy King (Blackie and Son),

or

(5) Indian Press Story Readers, Grade II, Tales of Wisdom (Indian Press, Ltd., Allahabad),

or

(6) The Second Book of Fables (Second Grade), (Oxford University Press), annas 14.

**UPPER MIDDLE SECTION.**

**Classes VII and VIII.**

(Same for boys and girls.)

*Conversation, reading and recitation.*—To carry on conversation in English; to read with correct pronunciation and expression; to form sentences and to answer questions in English, using the vocabulary of the text; to recite from memory suitable passages of English poetry and prose.

*Supplementary reading.*—At least one easy book a session.

*Dictation and writing.*—Dictation of unseen passages of the standard indicated by the prescribed text; transcription.

*Grammar and composition.*—Revision of previous work; verbs, active and passive voices; moods; gerunds and verbal nouns; auxiliary verbs; complements of verbs; formal parsing; clause analysis of complex and compound sentences; elementary forms of direct and indirect speech. Oral and written exercises on the above.

*Written composition.*—Simple free composition, e.g., letter-writing, story-writing and description; translation from English into Modern Indian Languages, and *vice versa*.

**Class VII.**

**Text-book prescribed :—**

(1) The Revised Modern India Readers, Book IV (Macmillan and Company, Limited), annas 10,

or

(2) New English Course for Indian Schools, fourth year reading book (Longmans, Green and Company),

or

(3) Indian Class Reader, IV, by P. C. Wren (K. and J. Cooper, Bombay),

or

(4) New Indian Empire Readers, fourth (Blackie and Son, Ltd.), annas 12.

**Recommended for supplementary reading :—**

(1) Simple School Unseens, by Rai Bahadur A. C. Mukerji (Macmillan and Company), annas 6,

or

(2) The "A. L." Bright Story Readers, Grade II (E. J. Arnold and Son, Limited),

or

(3) Young India Readers, Grade III (Oxford University Press).

or

(4) The New Method Readers (new series) Robinson Crusoe by Daniel Defoe, Supplementary Reader III, edited by Michael West (Longmans, Green and Company),

or

(5) Tales of India, Junior 7, Mitragupta, Prince of Magadha (Macmillan & Co.),

or

(6) Indian Story Readers, Grade P, No. 1 (Short Stories for Small Folk), (Macmillan & Co.),

or

(7) Across India, by Clayton (Christian Literature Society for India, Allahabad),

or

(8) The Third Book of Fables (Third Grade), (Oxford University Press), annas 14.

**Class VIII.**

**Text-book prescribed :—**

(1) The Revised Modern India Readers, Book V (Macmillan and Company, Limited), annas 12,

or

(2) New English Course for Indian Schools, fifth year reading book (Longmans, Green and Company),

or

(3) New Indian Empire Readers, fifth (Blackie and Son, Ltd.), Re. 1.

**Recommended for supplementary reading:—**

(1) Simple School Unseens, by Rai Bahadur A. C. Mukerji (Macmillan and Company), annas 6,

or

(2) The "A. L." Bright Story Readers, Grade III (E. J. Arnold and Son, Limited),

or

(3) Young Indian Readers, Grades IV and V (Oxford University Press),

or

(4) Tales of India, Senior 9, Tales of the Heroines of India (Macmillan & Co.),

or

(5) Indian Story Readers, Grade I, No. 1 (Hospitality Repaid and Other Stories), (Macmillan & Co.),

or

(6) Robinson Crusoe (Blackie and Son, Limited),

or

(7) Epic Tales of the East (Oxford University Press),

or

(8) Stories of Indian Youth, Part I (Longmans, Green and Co.)

**Grammar and composition for classes V to VIII.**

**Recommended for use in the middle section:—**

(1) The Middle School English Grammar, Parts I and II, by L. Tipping (Macmillan and Company, Limited).

(2) Inductive Grammar, Book II for class V, Book III for class VI and Book IV for classes VII and VIII, by Ganga Prasad (Rai Sahib Ram Dayal Agarwala, Allahabad).

(3) A Survey of English Grammar, by Winbolt (Blackie and Son, Limited).

(4) Pitman's Lessons in Composition, Parts I, IA and II (J. Eaton Peasey, Sir Isaac Pitman and Sons, Limited).

(5) Elementary English Grammar on Modern Lines, by P. C. Wren (K. and J. Cooper, Bombay).

(6) Progressive Composition, by P. C. Wren (K. & J. Cooper, Bombay).

(7) Oxford Grammar for Junior Classes, Part I for class V, Part II for class VI, and Part III for classes VII and VIII (Oxford University Press).

The following English copy-books are recommended for use for writing in the middle section :

- (1) Series 3, 4, 5 and 6, Blackie and Sons (Vere Foster's), anna-one and pies six per copy.
  - (2) Upright and semi-upright, by Longmans, Green and Company.
  - (3) Oxford Copy Books, Nos. 1—12 (Oxford University Press).
- The Little Oxford Dictionary (Oxford University Press) is recommended for use in classes VII and VIII.

### SYLLABUS OF THE COURSES IN HINDI AND URDU.

(Same for boys and girls for classes V to VIII.)

- I.—Reading—which includes silent reading, reading aloud and recitation.
- II.—Composition—oral and written.
- III.—Dictation and writing.
- IV.—Grammar.

#### LOWER MIDDLE SECTION.

##### Class V.

##### *I.—Reading—*

The reader for class V should contain about 150 pages, of which about 100 pages should be devoted to prose selection and about 50 pages to poetry.

It should contain the following subjects ordinarily :—

##### *Prose.*

- (1) Stories, fairy tales and legends. Stories should be of imagination, romance and adventure.
- (2) Biographical and historical pieces about kings, heroes and saints.
- (3) Stories of invention and discovery, e.g., the steam engine, gramophone, discovery of America, polar expedition, etc.
- (4) Simple dramatic pieces, including dialogues.
- (5) Descriptive scenes of cities, natural phenomena, battles, etc.

##### *Poetry.*

- (1) Imaginative—lyric and ballad.
- (2) Descriptive—natural scenes and phenomena, buildings, etc.
- (3) Narrative, e.g., Ramayana, Mahabharata, Marsias.
- (4) Patriotic.
- (5) Didactic.

Memory work—About 100 lines of poetry should be committed to memory by every student.

Supplementary reading—About 200 pages of supplementary reading should be done.

**II.—Composition—**

Oral—story-telling, debate, dialogue, drama.

Written—(a) Description of observed events, places, phenomena, etc., imagination description.

(b) Letter-writing.

(c) Completion of stories, re-telling of stories, elaboration of outlines.

**III.—Writing and dictation—**

Writing should include copying from model copy-books as well as from ordinary readers.

Dictation should be used as an aid to concentration and to draw the attention of boys towards (1) words having the same sound but different spelling, (2) words having the same spelling but different meaning, and (3) etymology of words.

**IV.—Grammar—**

Analysis of a simple sentence into subject and predicate; kinds of sentences, i.e., statement, question, command.

Parts of speech.

Nouns—Number, gender.

Pronouns—Number, gender.

Verbs.

**Text-book prescribed in Hindi:—**

(1) Hindi Sar Sangrah, Part I, by Kali Das Kapur (Agarwal Press, Allahabad), annas 6,

or

(2) Sahitya-Suman, Part I (Indian Press, Limited, Allahabad), annas 8,

or

(3) Hindi Sahitya-Sangrah, Part I, by Pandit Ganga Datta Pande (Ram Prasad and Brothers Agra), annas 8,

or

(4) Sahitya Sudha, Part I (Agarwal Press, Allahabad), annas 8,

or

(5) Nootan Hindi Pathawali, Part I (City Book House, Cawnpore), annas 8.

**Recommended for supplementary reading in Hindi:—**

(1) Kathinai men Vidyabhiyas (Hindi Granth Ratnakar Karyalaya, Bombay).

(2) Sheikh Chilli-ki-kahani (Indian Press, Limited, Allahabad).

- (3) Sati (Indian Press, Limited, Allahabad).
- (4) Savitri (Indian Press, Limited, Allahabad).
- (5) Damayanti (Indian Press, Limited, Allahabad).
- (6) Sahase Bachche, by Pandits Sri Ram Bajpai and Murari Lal Sharma (Lala Ram Narain Lal, Allahabad).
- (7) Viron ki Sachchi Kahaniyan (Chhatra Hitkari Pustakmala, Daraganj, Allahabad).
- (8) Pushpanjali (Rai Sahib Ram Dayal Agarwala, Allahabad).

**Text-book prescribed in Urdu :—**

- (1) Gulistan-i-Adab, Part I (Agra Publishing House), 1928, annas 8,  
or  
(2) Ruh-i-Adab, Part I (Vidya Printing Press, Meerut), annas 8,  
or  
(3) Bostan-i-Adab, Part I (Ram Prasad and Brothers, Agra),  
or  
(4) Shahrah-i-Adab, Part I (Talugdar Press, Lucknow), annas 8,  
or  
(5) Jauhar-i-Urdu (University Publishing House, Agra), annas 5.

**Recommended for supplementary reading in Urdu :—**

- (1) Tuhfa-i-Japan (Indian Press, Limited, Allahabad).
- (2) Tuhfa-i-Misr, by Maulana Asghar Husain (Indian Press, Limited, Allahabad).
- (3) Dastan-i-Ajam, by Maulvi Hamid Ali (Indian Press, Limited, Allahabad).
- (4) Muntakhibul Hikayat, by Dr. Nazir Ahmad (Muslim University Institute Press, Aligarh).
- (5) Adbe Moti (Ram Prasad and Brothers, Agra).
- (6) Kimti Afsane (Gaya Prasad and Sons, Agra).

**Class VI.**

*I.—Reading*—150 pages of which 100 are prose and 50 poetry. The subjects in prose and poetry will be of the same nature as in class V, but the selected pieces will be more difficult in language and ideas than those for class V.

Supplementary reading—about 200 pages.

Memory work—100 lines.

*II.—Composition*—Same as in class V.

*III.—Writing and dictation*—Same as in class V.

*IV.—Grammar*—

Verb—Person, number, tense, mood, voice.

Remaining parts of speech.

Order of words in sentences.

**Text-book prescribed in Hindi:—**

(1) Hindi Sar Sangrah, Part II, by Kali Das Kapur (Agarwal Press, Allahabad), annas 6,

or

(2) Sahitya-Suman, Part II (Indian Press, Limited, Allahabad), annas 8,

or

(3) Hindi Sahitya-Sangrah, Part II, by Pandit Ganga Datta Pande (Ram Prasad and Brothers, Agra), annas 8,

or

(4) Sahitya Sudha, Part II (Agarwal Press, Allahabad), annas 8,

or

(5) Nootan Hindi Pathawali, Part II (City Book House, Cawnpore), annas 8.

**Recommended for supplementary reading in Hindi:—**

(1) Chamatkari Balak, by Devi Prasad (Indian Press, Limited, Allahabad).

(2) Viron ki Kahaniyan (Hindi Granth Ratnakar Karyalaya, Bombay).

(3) Abraham Lincoln (Abhyudaya Press, Allahabad).

(4) Arya Lalana, by Pandit Mannan Dwibedi Gajpuri (Lala Ram Narain Lal, Allahabad).

(5) Balraghuvansha (Indian Press, Limited, Allahabad).

(6) Samudra Par Vijay (Rai Sahib Ram Dayal Agarwala, Allahabad).

(7) Japan ka Hal (Indian Press, Limited, Allahabad).

**Text-book prescribed in Urdu:—**

(1) Gulistan-i-Adab, Part II (Agra Publishing House), 1928, annas 8,

or

(2) Ruh-i-Adab, Part II (Vidya Printing Press, Meerut), annas 8,

or

(3) Bostan-i-Adab, Part II (Ram Prasad and Brothers, Agra),

or

(4) Shahrah-i-Adab, Part II (Taluqdar Press, Lucknow), annas 8,

or

(5) Akhtar-i-Urdu (University Publishing House, Agra), annas 8.

**Recommended for supplementary reading in Urdu:—**

(1) Tuhfa-i-Japan (Indian Press, Limited, Allahabad).

(2) Tuhfa-i-Misir, by Maulana Asghar Husain (Indian Press, Limited, Allahabad).

(3) Dastan-i-Ajam, by Maulvi Hamid Ali (Indian Press, Limited, Allahabad).

- (4) Muntakhibul Hikayat, by Dr. Nazir Ahmad (Muslim University Institute Press, Aligarh).
- (5) Tohfa-i-Chin (Indian Press, Allahabad), annas 10.
- (6) Sehat-ki-Jinnat (Gaya Prasad and Sons, Agra).
- (7) Tohfa-i-America (Indian Press, Allahabad), annas 10.

## UPPER MIDDLE SECTION.

### Class VII.

#### *I.—Reading—*

The reader should consist of 140 pages of prose and 60 pages of poetry.

The following subjects should be added to the list for classes V and VI :—

- (1) Reflective pieces.
- (2) Moral pieces.
- (3) Scientific stories.
- (4) Short stories.

Students should memorise 125 lines.

Supplementary reading should cover about 250 pages.

#### *II.—Composition—*

Oral and written on lines similar to those recommended for classes V and VI.

#### *III.—Dictation—*

More difficult exercises.

#### *IV.—Grammar to be taught in correlation with composition and as an aid to correct expression—*

- Syntax—Government and order.
- Analysis of complex sentences.
- Different forms of narration.
- Simple figures of speech.

#### **Text-book prescribed in Hindi :—**

(1) Hindi Sar Sangrah, Part III, by Kali Das Kapur (Agarwal Press, Allahabad), annas 8,

or

(2) Hindi-Kusumavali, Part I (Indian Press, Limited, Allahabad), annas 10,

or

(3) Sahitya Sudha, Part III (Agarwal Press, Allahabad), annas 10,

or

(4) Nootan Hindi Pathawali, Part III (City Book House, Cawnpore), annas 10.

#### **Recommended for supplementary reading in Hindi :—**

(1) Mahadeo Govind Ranade, by Pandit Ram Narain Misra (Nagri Pracharini Sabha, Benares).

(2) Robinson Crusoe (Indian Press, Limited, Allahabad).

**Text-book prescribed in Urdu :—**

(1) Gulistan-i-Adab, Part III (Agra Publishing House), 1928, annas 10,

or

(2) Ruh-i-Adab, Part III (Vidya Printing Press, Meerut), annas 10,

or

(3) Bostan-i-Adab, Part III (Ram Prasad and Brothers, Agra),

or

(4) Shahrah-i-Adab, Part III (Taluqdar Press, Lucknow), annas 10.

**Recommended for supplementary reading in Urdu :—**

(1) Qasas-i-Hind ( قصص ہند ) (Rai Sahib M. Gulab Singh and Sons, Lahore).

(2) Raj Dulari ( راج دلاری ), by Brij Mohan Dattatriya Kaife (Pandit Piaray Mohan, Bansmandi, Anarkali, Lahore).

(3) Dastan-i-Ajam, Part II, by Maulvi Hamid Ali (Indian Press, Limited, Allahabad).

**Class VIII.**

*I.—Reading*—200 pages containing prose and poetry on subjects similar to those of the reader in class VII, but pieces of greater difficulty will be selected.

*Supplementary reading*—250 pages.

*Memory work*—125 lines.

*II.—Composition*—Same as for class VII.

*III.—Dictation*—Same as for class VII.

*IV.—Grammar*—Same as for class VII.

**Text-book prescribed in Hindi :—**

(1) Hindi Sar Sangrah, Part IV, by Kali Das Kapur (Agarwal Press, Allahabad), annas 8,

or

(2) Hindi-Kusumavali, Part II (Indian Press, Limited, Allahabad), annas 10,

or

(3) Hindi-Ratna-Sangrah, by Sudarshan Acharya (Griha Lakshmi Karyalaya, Allahabad), annas 10,

or

(4) Sahitya Sudha, Part IV (Agarwal Press, Allahabad), annas 10,

or

(5) Nootan Hindi Pathawali, Part IV (City Book House, Cawnpore), annas 10.

**Recommended for supplementary reading in Hindi :—**

(1) Galpa Guchha, Part I (Indian Press, Limited, Allahabad), annas 12.

(2) Singh Garh Vijai (Abhyudaya Press, Allahabad).

- (3) Robinson Crusoe (Indian Press, Limited, Allahabad).
- (4) Bal Rabindranath (Indian Press, Limited, Allahabad).
- (5) Bipta (Hindustan Press, Allahabad).
- (6) Pratapi Pratap (Gautam Brothers, Cawnpore).

**Text-book prescribed in Urdu:—**

(1) Gulistan-i-Adab, Part IV (Agra Publishing House), 1928, annas 10,

or

(2) Ruh-i-Adab, Part IV (Vidya Printing Press, Meerut), annas 10,

or

(3) Bostan-i-Adab, Part IV (Ram Prasad and Brothers, Agra),

or

(4) Shahrah-i-Adab, Part IV (Taluqdar Press, Lucknow), annas 10.

**Recommended for supplementary reading in Urdu:—**

Nasihah-ka-karanphool ( نصیحت کا کون پھول ); by Maulana Azad (Khalifa Syed Mohammad Salim, Manager, Azad Book Dépôt, Akbari-mandi, Lahore).

**Grammar recommended in Hindi:—**

**Classes V to VIII.**

(1) Bhasha Vyakaran Bodh, by Pandit Chandra Mauli Shukul (Nand Kishore and Brothers, Benares).

(2) Hindi Vyakaran, Parts I and II, by Ganga Prasad (Rai Sahib Ram Dayal Agarwala, Allahabad).

(3) Madhya Hindi Vyakaran, by Pandit Kamta Prasad Guru (Kashi Nagri Pracharini Sabha, Benares).

**Classes VII and VIII.**

**Recommended for use as a guide for teachers in teaching Hindi composition:—**

(1) Hindi Composition for Vernacular and Anglo-Vernacular Schools, by Ganga Prasad (Rai Sahib Ram Dayal Agarwala, Allahabad).

(2) Rachna Piyush, by Pandit Chandra Mauli Shukul (Indian Press, Limited, Allahabad).

(3) Navin Patra Aur Nibandh Lekhan (School Book and Apparatus Dépôt, Lucknow).

**Grammar recommended in Urdu:—**

**Classes V to VIII.**

(1) Mubadi-ul-Qawaid ( مبادی القواعد ), by Maulvi Fateh Muhammad Khan (Messrs. Attar Chand Kapur and Sons, Lahore).

(2) Afzal-ul-Qawaid ( افضل القواعد ), by Maulvi Fateh Muhammad Khan (Messrs. Attar Chand Kapur and Sons, Lahore).

(3) Tahzib-ul-Qawaid, Part II (Indian Press, Limited, Allahabad).

(4) Mukhtasar Qawaid, Part II (Rai Sahib Ram Dayal Agarwala, Allahabad), annas 8.

NOTE.—Schools will be separately notified what books are approved for recitation in classes V to VIII.

## SYLLABUS OF THE COURSES IN MATHEMATICS.

## Arithmetic.

## LOWER MIDDLE SECTION.

(Same for boys and girls.)

## Class V.

Revision of work in lower classes; more difficult examples in vulgar fraction; vulgar fractions of concrete quantities; simple practice; simple calculations in the four simple rules with decimal fractions (excluding recurring decimals); conversion of vulgar fraction into decimal fractions to a given number of places, and *vice versa* (excluding recurring decimals). Oral and written problems of a concrete type.

## Class VI.

Revision; simple percentages; more difficult examples with vulgar and decimal fractions (excluding recurring decimals); decimal fractions of concrete quantities; ratio and simple proportion; the unitary method; simple interest; easy square and cube root by factors; oral and written problems on the above with attention to approximations.

NOTES. I.—In classes V and VI weights and measures in common use should be taught.

II.—For girls this is the full course for those who intend to continue their studies in the Upper Middle Section.

Examples suitable for the illustration of principles may be selected from the following books recommended:—

## Classes V and VI.

(1) Middle School Arithmetic, Part I (Hindi and Urdu), by Shyam Behari Lal Kapur (Agarwal Press, Allahabad), annas 12,

or  
(2) Modern Arithmetic, Book II (Urdu or Hindi), (Indian Press, Limited, Allahabad), annas 6 (revised edition),

or  
(3) United Provinces Vernacular Arithmetic, Parts II and III (Blackie and Son, Limited),

or  
(4) Longmans' Urdu Middle Arithmetic, Part III,

or  
(5) Longmans' Vernacular School Arithmetic, Hindi, Part III.

## UPPER MIDDLE SECTION.

## Classes VII and VIII.

(Same for boys and girls.)

Units of length in British and metric systems; calculations; measurement of straight lines; measurement of curved lines; rules for the length of the circumference of a circle; units of areas in British and metric systems; rules for area of a rectangle, use of squared paper to

find the area of figures other than rectangles; formula for the area of a triangle; units of volume in British and metric systems; rules for the volume of a rectangular solid; units of weight in British and metric systems; extracting square roots; compound proportion; proportional parts; percentages; profit and loss; oral and written problems on the above with attention to approximation.

Examples suitable for the illustration of principles may be selected from the following books recommended:—

(1) A new Arithmetic for Indian Schools, by Workman and Sime (Rai Sahib Gulab Singh and Sons, Lahore),

(2) Senior Modern Arithmetic (Indian Press, Limited, Allahabad), Re. 1-8,

or  
(3) Longmans' Urdu Middle Arithmetic, Hindi, Part III,

or  
(4) Longmans' Vernacular School Arithmetic, Hindi, Part III,

or  
(5) Middle School Arithmetic, Part II (Hindi and Urdu), by Shyam Behari Lal Kapur (Agarwal Press, Allahabad), annas 12.

#### Algebra.

#### UPPER MIDDLE SECTION.

##### Classes VII and VIII.

(Same for boys and girls.)

Symbolical expression; substituting; brackets; addition; subtraction; easy multiplication; easy division; simple equations with one unknown quantity; graphs of straight lines; easy simultaneous equations involving two unknown quantities; problems involving the above.

Examples suitable for the illustration of principles may be selected from the following books recommended:—

(1) Baker and Bourne's Shorter Algebra (Bell and Sons),

or  
(2) Hall's School Algebra for Indian Schools, Part I (Macmillan & Co.),

or  
(3) Modern Algebra for Middle classes, by Mewa Ram (Hindi and Urdu), (G. R. Bhargava and Sons, Chandausi),

or  
(4) New Middle School Algebra (Hindi and Urdu), by A. S. Sinha (Macmillan & Co.),

or  
(5) Middle School Algebra (Hindi and Urdu), by S. B. L. Kapur (Indian Press, Limited, Allahabad).

Geometry.

UPPER MIDDLE SECTION.

Classes VII and VIII.

(Same for boys and girls.)

I.—The following theorems should be taught. Practical proofs by measuring, drawing and superposition should be given. Formal proofs are not necessary :—

- (1) If a straight line stands on another straight line, the sum of the two angles so formed is equal to two right angles and the converse.
- (2) If a straight line cuts two other straight lines and a pair of corresponding angles are equal, the two straight lines are parallel and the converse.
- (3) If two triangles have two sides of the one equal to two sides of the other, each to each, and also the angles included by those sides equal, the triangles are congruent.
- (4) If two triangles have two angles of the one equal to two angles of the other, each to each, and also a side of the one equal to the corresponding side of the other, the triangles are congruent.
- (5) If two triangles have three sides of the one equal to three sides of the other, each to each, the triangles are congruent.
- (6) The area of a rectangle is measured by the product of the measure of its sides.

II.—Problems and practical work (without formal proof) :—

- (1) To bisect a given angle.
- (2) To bisect a given straight line.
- (3) To construct a perpendicular to a given straight line (i) from a given point in the line; (ii) from a given point outside the line.
- (4) To construct an angle equal to a given angle.
- (5) To divide a straight line into any number of equal parts or in a given ratio.
- (6) The construction of angles of  $60^\circ$ ,  $45^\circ$ ,  $30^\circ$ .
- (7) The construction of triangles and quadrilaterals from sufficient data.
- (8) The construction of a rectangle equal in area to a given rectangle and having one side of given length.

## III.—Theorems to be studied with proofs and riders—

- (1) If two straight lines intersect, the vertically opposite angles are equal.
- (2) When a straight line cuts two other straight lines (i) if a pair of alternate angles are equal or (ii) a pair of interior angles on the same side of the cutting line are together equal to two right angles, then the two straight lines are parallel.
- (3) The converse of the above.
- (4) Straight lines which are parallel to the same straight line are parallel to one another.
- (5) The sum of the angles of a triangle is equal to two right angles.  
*Cor. 1.* If one side of a triangle is produced, the exterior angle so formed is equal to the sum of the interior opposite angles.  
*Cor. 2.* If two triangles have two angles of the one equal to two angles of the other, each to each, then the third angles are equal.  
*Cor. 3.* In a right angled triangle (i) the right angle is the greatest angle and (ii) the sum of the remaining angles is equal to a right angle.
- (6) In a polygon of  $n$  sides, the sum of the interior angles is equal to  $2n - 4$  right angles.  
*Cor. 4.* If the sides of a convex polygon are produced in order, the sum of the angles so formed is equal to  $4$  right angles.
- (7) If two sides of a triangle are equal the angles opposite to these sides are equal.
- (8) The converse of the above.
- (9) If two triangles have two sides of the one equal to two sides of the other, each to each, and the angles opposite to one pair of equal sides are right angles, the triangles are congruent. (Ambiguity to be discussed.)
- (10) Of all the straight lines that can be drawn to a given straight line from a given point outside it, the perpendicular is the shortest.
- (11) The opposite sides and angles of a parallelogram are equal; each diagonal bisects the parallelogram and the diagonals bisect one another.
- (12) The converse of the first, second and the fourth parts of the above (11).

(13) Straight lines joining the extremities of parallel and equal straight lines on the same side are also parallel and equal.

(14) The area of a parallelogram is equal to the area of a rectangle on the same base and between the same parallels.

*Cor.* 1. The area of a parallelogram is measured by the product of the measure of its base and altitude.

*Cor.* 2. Parallelograms on the same or equal bases and of the same altitude are equal in area.

(15) The area of a triangle is equal to one-half the area of a rectangle on the same base and between the same parallels.

*Cor.* 1. The area of a triangle is measured by one-half the product of the measures of its base and altitude.

*Cor.* 2. Parallelograms on the same or equal bases and of the altitude are equal in area.

*Cor.* 3. Converse of the above.

(16) If a parallelogram and a triangle stand on the same base and between the same parallels, the area of the parallelogram is double that of the triangle.

(17) The sum of the squares on the two sides of a right angled triangle containing the right angle is equal to the square on the hypotenuse; and its converse.

NOTE.—The theorems on areas should be done formally only after the boys have been taught the truths of the theorems graphically or practically.

**Books recommended :—**

(1) Parkinson and Pressland : A Primer of Geometry (Clarendon Press, Oxford), (Indian edition), Re. 1-12,

or

(2) Middle School Geometry for classes VII and VIII, by Shiva Nath Singh (Indian Press, Limited, Allahabad), Re. 1,

or

(3) Pierpoint's Elements of Geometry, Part I, Experimental Section, Urdu and Hindi editions (Indian Press, Limited, Allahabad),

or

(4) A Shorter School Geometry, Part I (new edition), by Hall and Stevens (Macmillan & Co.),

or

(5) High School Geometry, Part I, by Paranjpe (Macmillan & Co.),

or

(6) Analytic Geometry in Hindi and Urdu, by S. B. L. Kapur (Agarwal Press, Allahabad).

## SYLLABUS OF THE COURSES IN HISTORY.

### LOWER MIDDLE SECTION.

#### Classes V and VI.

(Same for boys and girls.)

Stories relating to the following should be studied in classes V and VI. In class V some ten to fifteen outstanding stories should be selected from Indian History :—

1. The Ramayana.
2. The Mahabharat.
3. Chandragupta and Asoka.
4. Vikramaditya and Kali Das.
5. Harsha.
6. Mahmud of Ghazni.
7. Prithwiraj, Alha and Udal.
8. Ala-ud-din.
9. Babar.
10. Akbar, Rana Pratap, Man Singh, Birbal, Todar Mal, Faizi, Abul Fazl.
11. Nur Jahan.
12. Shahjahan, Taj Mahal.
13. Aurangzeb, Shivaji, Guru Govind Singh.
14. Ranjit Singh.
15. Raja Ram Mohan Rai.
16. Sir Syed Ahmad Khan.
17. Dadabhai Naoroji.
18. Victoria.
19. George V.

#### Books recommended :—

(1) Qasas-i-Hind, Parts I and II, (Urdu edition only), (Rai Sahib Gulab Singh and Sons, Lahore),

or

(2) Bharat ke Sapnt (Hindi) revised edition, by Suraj Narayan Mathur (Hind ke Jan Nisar (Urdu)), (Rai Sahib Ram Dyal Agarwala, Allahabad).

or

(3) Hindi ke Chand Sartai (Urdu), Parts I and II. (City Book House, Cawnpore).

### UPPER MIDDLE SECTION.

#### Classes VII and VIII.

(Same for boys and girls.)

#### *Outlines of Indian History.*

1. Geographical features of India.
2. Aryans and Dravidians.

3. The Vedas and the old Aryan customs and manners. The Ramayan and the Mahabharat.
4. Jainism and Buddhism and their influence.
5. Alexander.
6. Chandragupta Maurya, description by Megasthenes.
7. Asoka.
8. Samudragupta, Vikramaditya, and Fa Hian.
9. Harsha Vardhan and Hieun Tsang.
10. Rajraj Chola.
11. The Rajput Kingdoms and early Muhammadan invasions.
12. Qutub-ud-din, Altamash, Razia and Balban.
13. Ala-ud-din Khilji.
14. The Bahmani Kingdom and Vijayanagar.
15. Muhammad and Firoz Tughlak, Timur.
16. Babar.
17. Humayun and Sher Shah.
18. Akbar.
19. Jehangir, Shahjahan.
20. Aurangzeb.
21. Aurangzeb's successors and fall of Moghal Empire.
22. Shivaji and rise of Mahratta power.
23. The Sikhs and Ranjit Singh.
24. East India Company; its early possessions.
25. Contests of the English and the French for the supremacy of India, Clive, Dupleix. Battles of Plassey and Wandewash.
26. Warren Hastings and Madho Rao Scindia.
27. Cornwallis and Tippu Sultan.
28. Wellesley.
29. Hastings.
30. Bentinck.
31. Dalhousie.
32. Canning.
33. India under the Crown.

**Books recommended :—**

(1) History of India, Parts I and II, by Professor Ishwari Prasad. M.A., LL.B. (Indian Press, Limited, Allahabad). (Urdu version, Re. 1 : Hindi version, annas 14),

or

(2) Bharat Varshaka Itihas, by Pandey Ramavatar Sharma (Sahitya Ratnamala Karyalaya, Benares city),

or

(3) Shalopayogi Bharatvarsha शालोपायोगी भारतवर्ष (Gandhi Hindi Pushtak Vandhar or Sahitya Bhawan, Limited, Allahabad).

or

(4) Introductory History of India, Parts I and II (Hindi and Urdu, revised editions), by Kali Das Kapur (Newal Kishore Press, Lucknow).

## SYLLABUS OF THE COURSES IN GEOGRAPHY.

## LOWER MIDDLE SECTION.

(Same for boys and girls, subject to the modification noted below.)

## Class V.

Revision of work done in class IV.

Use of the globe in explanation of the phenomena of day and night. Practical work in connexion with the variation of seasons; record of the length of days and nights in the different seasons; observation of the height of the sun with the help of a vertical rod.

Reading of the bathytopographical map of India; colouring, scale, direction, measurement of distances. Flow of the rivers, the coast line and the seas.

Natural divisions of India; Northern mountains (different ranges, sources of chief rivers, climate, zones of vegetation, life of the people as affected by the mountains); Indo-Gangetic plain (climate, river system, products, life of the people); the Deccan (river system, soil and minerals, life of the people); coastal plains (rainfall, products); Ceylon and Burma (description of land and rivers, climate and vegetation, life of the people).

The names and positions of the more important provinces and Indian States. Names and positions of the chief towns. Communications.

*Local studies.*—The post office. The market. How the country feeds the town.

These studies shall be carried out by means of excursions and simple projects.

*Foreign studies.*—A series of about ten lessons dealing with the life and occupations of some of the typical peoples of the world.

NOTE.—Pupils should be required to fill in sketch maps of India, showing (a) natural divisions, and (b) the most important towns.

**Books recommended :—**

(1) \*Anglo-Vernacular School Geography, Book I, Part II (Urdu or Hindi), (Longmans, Green and Company), (Urdu, annas 10; Hindi, annas 8),

or

(2) The Anglo-Vernacular Middle Geography, Part II (Indian Press, Limited, Allahabad), (revised edition), (Hindi and Urdu editions, annas 8 each),

or

(3) Bhugol Digdarshan (Hindi), Part II, by Kamta Prasad Nigam (Rai Sahib Ram Dayal Agarwala, Allahabad), annas 8.

(1) Vichitra Dunia (Hindi), by Kamta Prasad Nigam (Rai Sahib Ram Dayal Agarwala, Allahabad, annas 8. (for foreign studies).

or

(2) Adbhoot Sansar (Hindi), Book II, annas 12  
Anokhi Dunia (Urdu), Book II annas 10 (Macmillan and Company),  
 (for foreign studies).

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\* This Geography, Book I, Parts I—III, is also available in one volume.  
 Urdu Rs. 2-4-0; Hindi, Rs. 1-4-0.

## Class VI.

Revision of previous work for the sake of contrast and comparison when dealing with new areas.

Reading of the bathytopographical map of Asia; simple ideas of the zones; climates of Asia.

The natural regions of Asia, with special reference to their vegetation, products and the life occupations of the people inhabiting these regions; the Tundras; the Great Northern Forests, grass lands and steppes; the mid-Asiatic table-lands; the eastern borderland and islands; the south-eastern coast lands and islands; the south-western deserts; the western table-lands and coast lands. Earthquakes and volcanoes (when studying Japan and the Eastern Archipelago.)

Countries of Asia: their position and the most important towns.

Comparison of other countries of Asia with India.

Trade routes.

*Local studies.*—The seasonal crops; a calendar of seed-time and harvest, local transport; local industries.

Practical work should be continued on the same lines as in class V, but in more detail.

NOTE.—Pupils should be required to fill in sketch maps.

**Books recommended:—**

(1) \*Anglo-Vernacular School Geography, Book I, Part III (Longmans, Green and Company), (Urdu, annas 12; Hindi, annas 8),

or

(2) The Anglo-Vernacular Middle Geography, Part III (Indian Press, Limited, Allahabad), (revised edition). (Hindi and Urdu editions, annas 9 each),

or

(3) Bhugol Digdarshan (Hindi), Part III, by Kamta Prasad Nigam (Rai Aina-Jugrafiya (Urdu)), Sahib Ram Dayal Agarwala, Allahabad, annas 8.

**UPPER MIDDLE SECTION.**

**Classes VII and VIII.**

(Same for boys and girls.)

(a) *Physical Geography.*—Revision of previous work.

Latitude and longitude. Practical work in the record and measurement of temperature and rainfall; terrestrial and seasonal winds and the record of their changes; causes of rainfall; the seasons; the oceans; ocean currents and waves, tides; simple land forms; the wearing away and the building up of lands.

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\*This Geography, Book I, Parts I—III, is also available in one volume. Urdu, Rs. 2-4-0; Hindi, Re. 1-4-0.

(b) *General Geography*.—Revision of previous work with special reference to India. Study of the natural regions of other continents on the same lines as indicated for the study of Asia in class VI. Outline study of physiographic and distribution maps. Trade routes to and from India.

NOTE.—Pupils should be required to fill in sketch maps.

**Books recommended :—**

\*Anglo-Vernacular School Geography, Book II (Urdu or Hindi), (Longmans, Green and Company), (Urdu, Rs. 3; Hindi, Rs. 2-4-0), for classes VII and VIII,

or

The Anglo-Vernacular Middle Geography, Part IV (Indian Press, Limited, Allahabad), (revised edition), for class VII,

The Anglo-Vernacular Middle Geography, Part V (Indian Press, Limited, Allahabad), (revised edition), for class VIII,

or

Bhugol Dikdarshan (Hindi) and Aina-Jugrafiya (Urdu), Part IV for class VII and Part V for class VIII, by Kamta Prasad Nigam (Rai Sahib Ram Dayal Agarwala Allahabad), annas 8 each part.

The following atlases are adopted for use in classes V to VIII :—

- (1) *विज्जिवावली* Published by the Arts Publishers, 8, Park Road, Allahabad. Hindi and Urdu editions, Re. 1 each.
- (2) Longmans' Indian Atlas (Hindi edition).

## SYLLABUS OF THE COURSES IN DRAWING AND HANDWORK.

(For boys.)

### Freehand Drawing in simple outline.

Subject-matter.	Classes.			
	V.	VI.	VII.	VIII.
Vertical, horizontal and oblique lines, singly and in combination.	Between given points of varying lengths; equidistant and at varying spaces.	For these standards Freehand Drawing should be correlated with Design, Colour and Object Drawing.		
Simple and compound curves.	Based on circle and ellipse and as found in leaf forms and between fixed points.			

\*This Geography is available in parts also :—

Book II, Part I (Urdu, Re. 1-2-0; Hindi, Re. 1).

Part II (Urdu, Re. 1-4-0; Hindi, Re. 1-2-0).

## Classes.

Subject-matter.	V.	VI.	VII.	VIII.
Straight-lined objects, square and rectangular.	Takhti, envelope, black-board, bucket, T and set squares, funnel, stool, glass.	Among these subjects will be common fruits (e.g., mango, apple, guava, cucumber, bunch of grapes, plantain, etc.), and flowers and foliage (e.g., wild rose, pea, kernel, motia, lily, sunflower, etc.), each object being taken individually.	The subjects enumerated in the previous standards as well as some household objects such as umbrella (opened and closed), vases, cages, butterflies, most familiar birds, opened books and a napkin hanging from one point. Tools such as chisels, hammer, mallet, screw-driver, planes, etc., to be combined and grouped together. <i>Note.</i> —Ordinarily the class is expected to do five groups each year, the selection of objects and their grouping being left to the discretion of the teacher.	
Circular and elliptical objects.	Ring, hoop, balls of sorts, egg and fruits of such shapes as brinjal, lauki, kheera, etc.	<i>Note.</i> —Ordinarily the class is expected to do four objects from each of the two groups, the selection of objects being left to the discretion of the teacher.		
Straight and curved lines in combination. (These to be done in pencil and in outline only.) And leading up to rapid sketching in of outline.	Cricket bat, tennis racket, cup, spoon, lota, bottle, chilimchi, garha, bread roller, etc. <i>Note.</i> —Ordinarily the class is expected to do four objects from each of the above three groups, the selection of objects being left to the discretion of the teacher.	..	Outlines in pencil are all that are needed here, under the head "Freehand Drawing".	

## Geometrical Drawing.

Subject-matter.	Classes.			
	V.	VI.	VII.	VIII.
Elementary exercise in simple Geometry. Leading up to Applied Geometry as necessary for decorative design, and handicraft purposes.	..	Dividing straight lines, erection of perpendicular, formation of angles; parallel lines, and simple polygons.  Will combine with colour work in very elementary use of the compasses and set-squares for inscribing figures.	Geometrical principles form basic parts of Design and Workshop Drawing. In these classes pure Geometry will not be taught as a separate subject, but will be of the variety known as "Applied Geometry" and many opportunities will necessarily arise when this subject will be involved, its principles applied and its value recognised.  Inscribed and described figures, simple geometrical problems. Decoration of spaces, and in combination with colour work.	Same as for class VII.

## Colour work in Pastel and in Brush.

Subject-matter.	Classes.			
	V.	VI.	VII.	VIII.
In monochrome only.  In pastel introducing the primary and secondary colours.  Brushwork in colour introducing primary, secondary, and tertiary colours.	As noted in the Object Drawing for this standard.		As noted in the object Drawing Chart for these standards.  Simple brush strokes and objects formed thereby and their value in decoration of space and borders.  Students should do work in pencil and monochrome shading before they begin colour work.	Same as in the previous standard, but more advanced.

Subject-matter.	Classes.			
	V.	VI.	VII.	VIII.
More advanced colour work with the theory of colour.	..	..	<p>Simple lessons on light, effect, both artificial and natural, and shades.</p> <p>Colour charts showing various shades obtained by different pigments and colour reflections and shades.</p>	<p>Simple decoration as for wrapper and colour work as applied to handicraft. Work in pencil and monochrome shading.</p>

### Design and Memory Drawing.

Subject-matter.	Classes.			
	V.	VI.	VII.	VIII.
<p>Principles of design.</p> <p>Designs based on natural and conventional forms and as applied to the work of the handicraft class, and also in simple decoration for stencil and carved work.</p> <p>Alphabets in different styles.</p> <p>Leading up to correct conception of essential elements for good design.</p>	..	..	<p>The objects already drawn under the section "Freehand Drawing" should be utilised in teaching decorative patterns. Students should also be required to draw common objects from memory, the object being shown for a few minutes and then taken away. Ordinarily six objects, three for "decorative patterns" and three for "Memory Drawing" should be done each year.</p>	

## \* Applied Drawing.

Subject-matter.	Classes.			
	V.	VI.	VII.	VIII.
Principles and practice of Workshop Drawing.	Full size elevations and plan of simple rectangular objects and leading up to the drawing of models already made in the handicraft class.	Full size drawing of all objects to be made in the handicraft classes. Application of Scale Drawing to larger objects such as almirah, table, and simple furniture.		
Application of orthographic projection Drawing and its general application to all trades.				
Scale Drawing and its value.	Making of plain scales.			Development of orthographic projection Drawing showing sectional views both of plan and elevation.  Full size setting out of work on rods as practised in the workshop.

## Handicraft—Stencil-cutting and Wood-work.

Subject-matter.	Classes.			
	V.	VI.	VII.	VIII.

\*Applied Drawing should be treated as a part of Handwork or Handicraft syllabus and should be taught by the teacher of that subject.

Subject-matter.	Classes.			
	V.	VI.	VII.	VIII.
Handicraft in wood. Involving practical bench work. Principles involved in cutting and other tools. Correct working methods with time-saving ends.	Wood-work including the use of the more common tools and the making of educative exercises such as Rectangular prism, Wind-ing strips, Octagonal block, Round ruler, Coat hook, Soap tray,	Continuing tool practice and the making up of models such as—  Pin tray, Watch stand, Pen tray, Cigarette box. Simple wall bracket, Coat hanger, Blotter.	Book stand, Towel hanger, Paper knife, Decorated wall bracket, Bench hook, Mitre block, Pin board, and objects introducing simple mechanical principles.	Oxford frame, Tea tray, Carved wall bracket, Book trough, Set square, T square, Candle-stand.
Care and maintenance of tools.	Envelope rack.	Elementary tool-sharpening.	Care and maintenance of tools. The more common Indian timbers, their value and distinguishing features. Common faults of timber. Familiar means for fastening glue, screws, nails, etc.; their proper place and use.	

N.B.—(1) The syllabus is based on the assumption that six periods a week at least should be allotted to Drawing and Handwork, and that the staff for teaching Drawing and Handwork be strengthened, with two teachers of Drawing and two of Handwork in schools with double sections up to class VIII and one teacher for each in schools with single sections.

(2) Schools which cannot adopt the whole course immediately should take up the Drawing course now and the whole course as soon as possible.

#### Books recommended for the use of teachers :—

(1) The teaching of Drawing—Its aims and methods, by S. Polak and H. C. Quilter (University Tutorial Press, Limited, London), 3s. 6d.

(2) Principles of Educational Wood-work, by W. A. Milton (Blackie and Sons, Limited).

(3) Educational Handwork, by A. H. Jenkins (University Tutorial Press, Burlington House, Cambridge), 4s.

(4) Manual Training for Indian Schools, by J. Y. Buchanan (Oxford University Press).

## SYLLABUS OF THE COURSES IN DRAWING WITH OR WITHOUT BRUSHWORK.

(For girls.)

### LOWER MIDDLE SECTION.

#### Class V.

*Drawing.*—(a) Circular and elliptical objects, e.g., ring, hoop, balls, egg, fruits and vegetable of such shapes as brinjal, melon, etc.

(b) Straight-lined objects (square and rectangular), e.g., takhti, envelope, black-board, T and set-squares.

(c) Combination of the two, e.g., bottle, envelope, bread roller, hat, flower-pot, etc.

*Colour work.*—Colouring drawings similar to those named above in monochrome only.

Blending of primary colours in pastel.

#### Class VI.

\**Drawing.*—The same as for class V, but more difficult objects.

*Colour work.*—Continuation of work in blending colours leading up to secondary and tertiary combinations—in both pastel and water colours. Colouring drawings of easy objects.

*Brushwork.*—Simple brush strokes and leaves and flowers formed thereby.

### UPPER MIDDLE SECTION.

#### Classes VII and VIII.

\**Drawing.*—Flowers and fruits with stems, buds and leaves; groups of two or three objects that have already been dealt with.

*Colour work.*—Colouring of drawings similar to those named above in primary, secondary, and tertiary tints—in pastel and water colours.

*Brushwork.*—As in the previous standard, but more advanced.

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\*Drawing should be done from objects and not from copies of drawings.

## SYLLABUS OF THE COURSES IN CLASSICAL LANGUAGES (SANSKRIT, ARABIC OR PERSIAN).

### Classes VII and VIII.

(Same for boys and girls.)

*Reading and conversation.*—To read with correct pronunciation and fluency from a reader. To use the words of the reader in simple sentences and to answer in the classical language questions based on the matter in the reader. To carry on simple conversation in the language.

*Writing.*—Writing to dictation or transcription.

*Grammar and composition.*—Only those conjugations and declensions to be learnt which have been very commonly used in the text-book. To form sentences with the help of the vocabulary of the reader.

### Sanskrit.

#### Classes VII and VIII.

##### Text-book prescribed :—

(1) Sanskrit Reader, Parts I and II, by Pandit Sarda Prasad Bhattacharya (Ram Narain Lal, Allahabad), annas 8 and 10 respectively,

or

(2) Sanskrit Reader and Grammar, Parts I, II and III (Ram Narain Lal, Allahabad), annas 6, annas 6 pies 9, and annas 9 respectively,

or

(3) Sanskrit Sopanam, by K. C. Chattopadhyay (Indian Press, Ltd., Allahabad), Part I for class VII and Part II for class VIII, Part I, annas 7 and Part II annas 8,

or

(4) Sanskrit Sikshabali, Parts I and II, by Chandra Sekhar Sharma (Hindi Press, Allahabad), Part I for class VII and Part II for class VIII, annas 8 each Part,

or

(5) Sanskrit Praveshika, by Chandra Shekhar Pande (Goutam Bros., Cawnpore), Part I for class VII and Part II for class VIII, Part I annas 8 and Part II annas 10.

##### Grammar recommended :—

(1) Sanskrit Vyakarana ki Upakramanika, by Pandit Iswar Chandra Vidyasagar (Ram Narain Lal, Allahabad).

(2) An elementary Sanskrit Grammar, by Baburam Saksena (Ram Narain Lal, Allahabad).

### Persian.

#### Class VII.

##### Text-book prescribed :—

(1) Khazin-i-Danish, Part I (whole) and Part II (pages 1—30), by Maulvi Jalal-ud-din Ahmad Jafri, Allahabad (Indian Press, Limited, Allahabad),

or

(2) Dastgah-i-Danish, Part I (Rai Sahib Ram Dayal Agarwala, Allahabad), annas 4.

**Class VIII.**

**Text-book prescribed :—**

(1) Khazin-i-Danish, Part II (pages 55 to end), by Maulvi Jalal-ud-din Ahmad Jafri, Allahabad (Indian Press, Limited, Allahabad),

or

(2) Dastgah-i-Danish, Part II (Rai Sahib Ram Dayal Agarwala, Allahabad), annas 10.

**Grammar recommended :—**

(1) Dastur-i-Farsi, Parts I and II, by M. H. S. Jalal-ud-din Ahmad Jafri (Indian Press, Limited, Allahabad).

(2) Farsi Grammar, by Mir Ahmad Shah (Rai Sahib Gulab Singh and Sons, Lahore).

(3) Zubdat-ul-Masadir (the new Manual of Persian Grammar), Part I, by Saiyid Muhammad Manzoor Ali (Bhargava School Book Dépôt, Aminabad Park, Lucknow), annas 2.

**Arabic.**

**Class VII.**

**Text-book prescribed :—**

Arbi-ki-pahli kitab, by Mir Ahmad Shah (Rai Sahib Gulab Singh and Sons, Lahore) and first twenty lessons from Arbi-ki-dusri kitab, by Mir Ahmad Shah (Rai Sahib Gulab Singh and Sons, Lahore).

**Class VIII.**

**Text-book prescribed :—**

Arbi-ki-dusri kitab from lesson 21 to end, and whole of Arbi-ki-tisri kitab, by Mir Ahmad Shah (Rai Sahib Gulab Singh and Sons, Lahore).

**Grammar recommended :—**

- |                   |      |  |
|-------------------|------|--|
| (1) Kitab-us-Sarf | (for | ) by Abdul Rahman of Amritsar (Ghulam Ali, Bookseller, Kashmir Bazar, Lahore). |
| class VII),       |      |  |
| (2) Kitab-un-Naho | (for | {  |
| class VIII).      |      |  |

**SYLLABUS OF THE COURSES IN PHYSICAL TRAINING AND HYGIENE.**

(For boys.)

**Physical Training.**

**Classes V to VIII.**

The following course of exercises and games is suggested :—

1. Scout drill.

2. Group games such as kabbadi, pick-a-back race, relay race, crocodile race, hockey, football, etc.
3. Sports—jumps, running, climbing, phari, gatka, etc.
4. Marching, formation of ranks, etc.

NOTE.—Heads of institutions are at liberty to introduce other games and exercises which they consider useful for their students.

### Hygiene.

#### LOWER MIDDLE SECTION.

##### Class V.

1. Cleanliness of person, hair, skin, teeth, care of eyes and ears.
2. Clothing materials—cleanliness, repair.
3. Cleansing of rooms, furniture and fittings.
4. Value of fresh air; ventilation.
5. Erect carriage and posture; position at study.
6. Proper care of food; mastication.

##### Class VI.

1. Warmth—fires, fuel, overcrowding.
2. Light—lighting, lamps, gas, electricity.
3. Water—washing, drinking, cleansing.
4. Breathing, perspiration, change of clothing and bedding.
5. Fresh air as food, bad air as poison.
6. Evils of tobacco, bhang, ganja, alcohol and opium.
7. Evils of over-feeding, under-feeding, unpunctual feeding.
8. Malaria, hookworm.

#### UPPER MIDDLE SECTION.

##### Class VII.

1. The skeleton.
2. The joints.
3. The muscles.
4. The internal organs, e.g., heart, lungs, kidneys, spleen, stomach and bladder.
5. The circulation of blood.
6. Brain and nerves.
7. Food, water and fresh air.
8. Insects and disease—flies, fleas, mosquitoes, lice.

**Class VIII.**

1. First-aid for the damage and displacement of bones.
2. Gatherings and how to treat them.
3. Sprains.
4. Burns.
5. Contagious diseases.
6. Plague, influenza, and chicken-pox, small-pox, measles.
7. Disinfection and disinfectants.

**Physical Training and Hygiene.**

**Books recommended for the use of teachers:—**

- (1) Handbook of Indian Games (National Council, Young Men's Christian Association, Calcutta).
- (2) Handbook of Playground and Compound Games (National Council, Young Men's Christian Association, Calcutta).
- (3) Manual of Physical Training for teachers, by K. R. Dube (Indian Press, Limited, Allahabad).
- (4) Vyayam Shiksha, by K. R. Dube (Indian Press, Limited, Allahabad).
- (5) The Army Young Men's Christian Association Games Handbook.
- \* (6) Indian Manual of First Aid in Hindi and Urdu (St. John's Ambulance Association).
- (7) Elementary Hygiene, by Bhatia and Suri (Longmans, Green and Company).
- (8) Scout Drill (Seva Samiti Boy Scouts' Association, Allahabad).
- (9) Hindustani Khel (Hindi Press, Allahabad).

**Hygiene.**

**Books recommended for use in classes V—VIII:—**

- (1) Swastha Niyam, Part I, for class V, annas 5.
- (2) Swastha Marm, Part II, for class VI, annas 5.
- (3) Swastha Sidhyant, Part III, for class VII, annas 6.
- (4) Swastha Adhar, Part IV, for class VIII, annas 6.
- (5) Adab-i-Tandurusti, Part I, for class V, annas 6, pies 6.
- (6) Rumuz-i-Tandurusti, Part II, for class VI, annas 7.
- (7) Osul-i-Tandurusti, Part III, for class VII, annas 7, pies 6.
- (8) Arkan-i-Tandurusti, Part IV, for class VIII, annas 5, pies 6.
- (9) Swastha Vigyan, Part I, annas 6, and Part II, annas 10 (Shri Ram Mehra & Co., Agra).

(Rai Sahib Gulab Singh and Sons, Lahore).

## SYLLABUS OF THE COURSES IN NATURE STUDY (MAINLY GARDENING).

(For girls.)

### LOWER MIDDLE SECTION.

#### Class V.

*Gardening.*—Preparing beds, planting seeds and watching growth; periodical cleaning; regular watering; keeping a garden calendar.

*Plant life.*—Previous knowledge of plant life to be summed up with reference to plants growing in the plots; seeds, studied in detail with reference to structure, food-storage, etc., conditions of germination with experiments; stems and leaves; adaptation of plants to their surroundings.

#### Class VI.

*Gardening.*—Origin of soil (from rocks by decomposition); textures (sand, silt, and clay); power of absorption and retention of moisture; need of cultivation and drainage in agriculture; need of manure, vegetative propagation (cuttings, grafting, underground runners); practical work on the foregoing to be done in the plots.

*Plant life.*—Work of roots, leaves and flowers in detail; tree studies; time of flowering and fruiting; bark and stem.

*Museum work.*—Preservation of leaves, fruits, seeds, butterflies and other specimens of plant and animal life.

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## SYLLABUS OF THE COURSES IN ELEMENTARY SCIENCE INCLUDING NATURE STUDY.

(For boys.)

### LOWER MIDDLE SECTION.

#### Class V.

*Time*—3 periods a week.

*Common objects* :—

(a) (i) Water, its sources, (ii) water level, spirit level, (iii) water supply, sources of contamination, taps, pipes and fountains, (iv) floating and sinking objects, rafts and boats.

(b) Railways, a steam engine.

(c) Paper-kite flying, windmill, water pump, charkha, grind-stone.

*Gardening.*—Preparing beds, planting seeds and watching growth; periodical cleaning; regular watering; keeping a garden calendar. The whole life cycle of one common plant to be studied and sketched.

*Plant life.*—Previous knowledge of plant life to be summed up with reference to plants growing in the plots; seeds, studied in detail with reference to structure, food-storage, etc.; conditions of germination with experiments; stems and leaves; adaptation of plants to their surroundings.

*Animal life.*—Broad popular classification of animals, referring to boy's previous knowledge and introducing reptiles and fishes; life history of the fly, the mosquito, and of the butterfly or silkworm representing the life history of a moth; the study of at least two birds with special reference to their beaks and claws and mode of living and resting; common garden friends and foes.

### Class VI.

*Time*—3 periods a week.

*Physics and Chemistry.*—(a) (i) Water, how to purify it. Decantation, filtration and distillation. Crystallization.

(ii) Boiling point of water, evaporation and condensation.

(iii) Various forms of water, cloud, rain, fog, dew, snow and hail-storm.

(b) Effect of heat on common substances, change of state, change of temperature, change of volume, use of Fahrenheit and Centigrade thermometers for daily temperatures, etc. Clinical thermometer.

(c) A magnet, its simple properties. Compass, its use on land and sea.

*Gardening.*—Origin of soil (from rocks by decomposition); textures (sand, silt and clay); power of absorption and retention of moisture; need of cultivation and drainage in agriculture; need of manure; vegetative propagation (cuttings, grafting, underground runners); practical work on the foregoing to be done in the plots.

*Plant study.*—Work of roots, leaves and flowers in detail, tree-studies, time of flowering and fruiting, bark and stem. Flow of sap, modifications of stems.

*Museum work.*—Preservation of leaves, fruits, seeds, butterflies and other specimens of plant and animal life.

### UPPER MIDDLE SECTION.

(Same for boys and girls.)

### Class VII.

The use of text-books by boys should be introduced at this stage; they are not required earlier.

*Physics and Chemistry.*—I.—(a) (i) Measurements of volumes of regular and irregular solids.

(ii) Use of graduated cylinder and burette in measuring volumes of solids and of liquids.

(b) Use of physical balance to find mass, weight of i.e.c. of various substances (both solid and liquid). Idea of density. Extension of a spring and the spring balance, double weighing; lever; principle of the balance.

(c) Construction and explanation of the principle of thermometers. Finding the boiling point and freezing point of water by Farenheit and Centigrade thermometers. Effect of impurities on the boiling point of water. Comparison of thermometers.

II.—(a) Examination of common substance with particular attention to solubility and effect of heat; the three states of matter; change of state.

(b) Study of the air, its constituents, oxygen, its common properties, respiration, rusting and burning.

(c) Water, formation when fuel burns. Examination of gas formed when water is passed over red hot iron. Examination of rusted iron. Conclusion.

(d) Hard and soft waters. Softening of hard waters. Removal of common stains from cotton and silk materials. Solvents and solutions; dry cleaning; removal of greese and ink spots.

*Plant life.*—Fruit. dispersal of fruit and seeds, the food material in seeds to be tested, flowers, adaptation to various ways of pollination.

### Class VIII.

*Physics.*—(a) Pressure exerted by liquids and gases with demonstration by simple experiments, the barometer, Archimedes' principle applied to sinking as well as floating objects, its application to specific gravity.

(b) How heat is conveyed from one place to another. Conduction; Convection, its application to ventilation and radiation.

*Electricity.*—(a) Frictional electricity, two kinds of electricity. How are lightning and thunder produced, use of lightning rod on buildings.

(b) Current, voltaic cell, heating and lighting effects of a current.

*Chemistry.*—(a) Carbon—As a constituent of coal, wood, sugar and oil; the result of combustion. Carbon dioxide tested with lime water, it is a constituent of air given out in breathing.

(b) Constituents of sugar, starch, fat and protein. Food, its kinds. suitability of food materials for different people. Tests of such food material as grain, dal, oilseed for starch, fat and protein.

*Plant life.*—Leaves—Arrangement with reference to light; food-making (test with iodine solution after clearing with hot alcohol) upper and lower sides of leaves.

NOTE.—Teachers may change the order and arrangement of the topics included in the syllabus of classes VII and VIII, if necessary.

**List of experiments for Physics and Chemistry in Elementary Science, including Nature Study, for classes VI to VIII.**

NOTE.—Teachers should frame their own syllabus of practical work on the basis of the suggested list of experiments. Students are required to keep a record of their practical work.

**Class VI.**

**Physics and Chemistry.**

*Effect of heat on substances. Change of temperature.*

1. Examine by means of a Fahrenheit thermometer the change in temperature of (a) a solid, (b) a liquid, and (c) a gas while being heated.

*Change of state.*

2. Study what happens when a piece of (a) ice, and (b) sulphur or wax is heated.

*Change of volume.*

3. Examine the change in volume when (a) a solid, (b) a liquid and (c) a gas are heated.

*Measurement of temperature.*

(Exercises in the use of the thermometer; not much theory.)

4. Measure the temperature of the air in the laboratory, using a Fahrenheit thermometer.
5. Reading of maximum and minimum thermometer.
6. Temperature of common objects :—
  - (a) Temperature of air at different times during the year.
  - (b) Temperature of water from various sources, and at various times during the year.
  - (c) Temperature of boiling water ; of ice water.
  - (d) Temperature of the human body.

*Evaporation and condensation.*

7. Observation of natural evaporation of water : evaporation by boiling.
8. Condense water vapour on a cold surface.
9. Observation of natural condensation in the form of clouds and rain ; in the form of dew. Breath during hot and cold weather. Steam from an engine.
10. Test the purity of water from various sources by evaporating and noting the residue.
11. Obtain pure water from a salt solution, well water or other water by distillation.
12. Evaporate distilled water to see if there is any residue.

### *Soil.*

13. Separation of soluble and insoluble portions of soil by decantation and filtration.

14. Find the amount of soluble matter by evaporation of the filtrate.

15. Separation of insoluble part of soil into particles of various sizes by flotation.

16. Comparison of the water-holding capacity of different soils (by adding equal amounts of water to equal amounts of different soils, and measuring the amount of water that drains off from each; or by allowing the wetted samples to dry naturally).

17. Observation of various kinds of soil in the field. [This connects directly with section (b) Gardening of class VI.]

### **Class VII.**

#### **Physics.**

##### *Measurement of volume.*

1. Find the volume of cubical, cylindrical, spherical and irregular solids by the use of graduated vessels.

2. Find the capacity of a large flask; of a small bottle.

##### *Measurement of mass.*

3. Use of the physical balance.

4. Find the mass of various common objects, e.g., of a rupee; of 1 c.c. of wood, iron, copper, etc.; of 1 c.c. of water, oil, milk, etc.

5. Find the volume of a bottle or flask by weighing.

6. Compare the Indian, English and C. G. S. units of weight.

7. Test bazar weights for accuracy.

##### *Heat and temperature.*

8. Show that solids (as an iron rod) expand on heating, and contract on cooling. Application to iron bridges and railway rails. (Accurate measurement of co-efficient of expansion should not be attempted here.)

9. Show that a liquid expands on heating and contracts on cooling.

10. Show that a gas (air) expands on heating and contracts on cooling.

11. Construct a thermometer (mercury or alcohol).

12. Find the boiling point of water in Fahrenheit and Centigrade degrees.

#### **Chemistry.**

##### *Matter and its three states.*

1. Examine the properties (such as colour, odour, solubility in water, effect on litmus if soluble, effect of heat, etc.) of common substances, such as chalk, salt, sulphur, iron, copper, sugar, soda, copper sulphate, iron sulphate, etc.

2. Determine the solubility of common substances, at ordinary (and raised) temperature (i.e. warm water can dissolve more of a salt than cold water).

3. Show that there is no loss of weight when a substance dissolves in water, and that by evaporation the substance can be recovered in original form.

4. Make crystals from saturated solutions of sugar, alum, nitre, copper sulphate, etc.

5. Examine the three states of matter, as illustrated by water.

6. Show that matter is indestructible (e.g. by burning a weighed candle and weighing the products). (Burn a candle under a tightly-sealed bell jar until the oxygen is used up: since none of the products can escape, weight should remain constant.)

### Class VIII.

#### Physics.

##### *Pressure.*

1. Show that the pressure of a liquid varies with depth.
2. Show that a liquid exerts pressure equally in all directions.
3. Show that air has weight.
4. Show that air presses equally in all directions.
5. Principle of the barometer. Make a simple barometer, and measure air pressure.
6. Show that the up-thrust on a solid immersed in water is equal to the weight of the water displaced by the body.
7. Find by Archimedes' principle the specific gravity of a solid which sinks in water; which floats on water.

##### *Levers and the balance.*

8. Study the principle of the balance by means of simple apparatus. Make a balance.
9. Find the weight of a body by means of double weighing.
10. If possible, test bazar balances for accuracy.
11. Find the weight of a body by means of a spring balance.

##### *Specific gravity.*

12. Find the specific gravity of a salt solution (or other liquid) by means of a density bottle.
13. Find the specific gravity of small solids by means of a density bottle.
14. Find the specific gravity of a liquid by means of a U-tube.

##### *Thermometry.*

15. Find the temperature of boiling water and of melting ice by both Fahrenheit and Centigrade thermometers.
16. Compare the scales of the two thermometers; illustrate by means of a graph. (The principle and use of the graph should be explained here.)

*Movement of heat.*

17. Show that heat is conducted through a solid.
18. Show that all solids are not equally good conductors of heat.
19. Show that water is a poor conductor of heat; that mercury is a good conductor.
20. Show how convection takes place in liquids (e.g. by means of potassium permanganate).
21. Show how convection takes place in glass (by means of smoke in the air over a lamp or candle).
22. Convection in nature :—
  - (a) The water of lakes.
  - (b) Air over heated land surfaces.
23. Movement of heat by radiation. (Heat from a fire; from the sun.)
24. Applications of the three methods of heat transference :—
  - (a) A cooking fire.
  - (b) Heat from the sun and its distribution over the earth.
  - (c) Cooling of the human body by perspiration.
  - (d) Air temperatures over land and water.
  - (e) Temperature of the soil at various depths.
  - (f) The use of clothing.
  - (g) Temperature inside and outside a house.

**Chemistry.***Combustion.*

1. Show that burning (of a candle or lamp) cannot take place without air.

*Examination of air.*

2. Show that air contains a gas that supports combustion, and an inert gas. (Burn phosphorus under a bell jar or graduated cylinder, and find out the approximate proportion of oxygen and nitrogen.)

*Water.*

3. Show that water contains hydrogen by studying the gas formed when steam is passed over red-hot iron. Examine the rusted iron. Natural rusting of iron. (This experiment may be supplemented by examination of the gas formed when sodium is burned in water.)

4. Show by hydrolysis that water contains oxygen and hydrogen.

*Hard and soft waters.*

5. Show that water from wells and rivers contains dissolved substances.

6. Show that rain-water contains very little dissolved substances.
7. Effect of boiling hard water: application to steam engines.
8. "Hard" and "soft" water and the lathering of soap.
9. Methods of softening hard waters.

*Carbon.*

10. Show by charring or the formation of soot that various organic substances (wood, coal, sugar, oil, etc.) contain carbon.

*Carbon Dioxide.*

11. Test the products of burning by means of lime water to show the presence of carbon dioxide.
12. Show the presence of carbon dioxide in the breath. In air. Regulation of amount of carbon dioxide in the air by green plants.
13. Air pollution; carbon dioxide from respiration of animals, cooking fires, burning, factories, etc., carbon from fires, oil, lights in bazars and factories.

*Acids and alkalis.*

14. Examine common acids (as hydrochloric, sulphuric and nitric) for appearance, smell, taste, effects on litmus and other common properties.
15. Examine ammonia, sodium or potassium hydroxide, and other common alkalis for their common properties.
16. Show the neutralizing effects of acids and alkalis.
17. Common occurrence of acids and alkalis (as in fruits, vinegar, "reh," etc.).

*Composition of common food materials.*

18. Test by charring for presence of carbon.
19. Test by burning for presence of water (i.e. hydrogen).
20. Test by burning for presence of carbon dioxide (i.e. oxygen).
21. Test by odour of burning for presence of nitrogen.
22. Test common food materials for—
  - (a) Starch, indicated by means of iodine solution.
  - (b) Fats, indicated by means of a grease spot on paper.
  - (c) Protein, indicated by means of iodine, or by the peculiar odour when burned.
23. Understand that these food materials are burned in the body to give energy, and that the carbon dioxide in the breath is evidence that combustion has taken place.

NOTE.—This list of experiments is intended to indicate the direction in which the teacher can develop his course of practical work, rather than to give a detailed list of

The following is suggested as the most desirable method of carrying out the experiments in Elementary Science, including Nature Study, for classes VI to VIII.

			Demonstration by teacher.	Performed by students.	Observation and discussion of natural phenomena.	One experiment by entire class.
CLASS VI.						
<i>Physics and Chemistry—</i>						
Exp. 1 ..	..	..	×	..		
Exps. 2—6 ..	..	..	..	×		
Exp. 7 ..	..	..	..	×	×	
Exp. 8 ..	..	..	..	×		
Exp. 9 ..	..	..	..	..	×	
Exp. 10 ..	..	..	..	×		
Exp. 11 ..	..	..	×	..		
Exps. 12—14 ..	..	..	..	×		
Exp. 15 ..	..	..	×			
Exp. 16 ..	..	..	×	..	×	×
Exp. 17 ..	..	..	..	..	×	
CLASS VII.						
<i>Physics—</i>						
Exps. 1—6 ..	..	..	..	×		
Exps. 7—11 ..	..	..	×	..		
Exp. 12 ..	..	..	×	×		
<i>Chemistry—</i>						
Exps. 1—4 ..	..	..	..	×		
Exps. 5—6 ..	..	..	×	..		
CLASS VIII.						
<i>Physics—</i>						
Exps. 1—5 ..	..	..	×			
Exps. 6—7 ..	..	..	×	×		
Exps. 8—16 ..	..	..	..	×		
Exps. 17—21 ..	..	..	×	..		
Exps. 22—24 ..	..	..	..	..		
<i>Chemistry—</i>						
Exp. 1 ..	..	..	..	×	×	
Exp. 2 ..	..	..	×	..	×	
Exp. 3 ..	..	..	×	×	×	
Exp. 4 ..	..	..	×	..	×	
Exps. 5—6 ..	..	..	..	×	×	
Exp. 7 ..	..	..	×	..	×	
Exp. 8 ..	..	..	..	×	×	
Exp. 9 ..	..	..	×	×	×	
Exps. 10—12 ..	..	..	..	×	×	

Demonstration by teacher.	Performed by students.	Observation and discussion of natural phenomena.	One experiment by entire class.
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*Chemistry—(concluded).*

Exp. 13 ..	..	..	..	×
Exps. 14—15	..	×	×	..
Exps. 16—22	..	..	×	..
Exp. 23 ..	..	..	..	×

Some of the experiments can best be performed and explained by the teacher; some can be demonstrated by the teacher and then performed by the students; some are intended for observation and discussion of natural phenomena; no. 16 in class VI can well be performed as a single experiment by the class as a whole, and perhaps other experiments might be treated in the same way. It is intended that the teacher shall use his judgment as to the most effective way of performing the experiments, having due regard to the nature and difficulty of the experiment, and to the amount of apparatus available.

**Text-book prescribed :—**

A text-book on elementary Science and Nature Study, by K. C. Bhattacharya (Indian Press, Ltd., Allahabad), (Hindi and Urdu), Part I for class VII and Part II for class VIII, annas 12 each part of each edition.

**Books recommended for the use of teachers :—**

(1) Vigyan Praveshika. (Vernacular Science Society, Allahabad).

مفتاح العلوم

(2) Nature Study in Hindi and Urdu, by D. N. Mukerji (Oxford University Press).

(3) Fortey, Isabel C.: Plant Studies for Indian Schools (Blackie and Son, Limited), 1921.

**SYLLABUS OF THE COURSES IN INDIAN MUSIC.****LOWER MIDDLE SECTION.**

(Same for boys and girls.)

**Class V.**

By the time a student reaches class V he must be about eleven years of age and it would be quite time to give his voice definite training. As music in its skeleton is a combination of twelve notes it will be essential to devote the greatest attention to the production of correct notes. The reproduction of these notes correctly is about all that a student could do in a year. The teachers should exercise the boys in this by writing new combinations on the black-board every time and making the class sing them.

The above, however, itself will be very trying, and it will therefore be essential to present a variety to the student in the form of songs. A few simple "Sargams," two prayers, and two or three simple songs are suggested.

But before the notes are taught one month should be devoted to the training of time beats of the following Tals :—Dadra, Tin Tal and Ek Tal.

The notation that the boys will learn at this stage will consist of writing down the flats and sharps in the three octaves.

#### Class VI.

*Theory.*—More advanced combinations of notes should be taught at this stage and the student should be able to reproduce without aid the scales of the three primary groups. Time, division and the formation of Tals will naturally come here.

*Practice.*—Three advanced sargams—one belonging to each of the three main heads (*Thats*).

Three advanced prayers—one belonging to each of the three main heads (*Thats*).

Three songs—one representative of each of the three main heads (*Thats*).

#### UPPER MIDDLE SECTION.

(Same for boys and girls.)

#### Class VII.

*Theory.*—A more detailed knowledge of notation should be called for in this class and the student should be expected to reduce simple sargam to notation with time bars. The ten groups and their formation should be taught and four more tals given, viz., Chautal, Dhamar, Jhup, one Sloka from Abhinava Rag Manjari and Hindi Dohas from Kalpadruman Kur.

*Practice.*—One song, one Lakshanr Git and one Sargam in each *That*.

#### Class VIII.

*Theory.*—Rag formation and Rag characteristics, styles, asthai, antara, classification under *Thats*. Elementary graces and their use in notation.

*Practice.*—One Khyal, one Dhrupad and one Dhamar from each *That*. Elementary Swara Prastar and *Tans*.

**SYLLABUS OF THE COURSES IN DOMESTIC SCIENCE  
(SIMPLE PHYSIOLOGY, HYGIENE AND SEWING).**

(For girls.)

**Simple Physiology and Hygiene.**

**LOWER MIDDLE SECTION.**

**Class V.**

A very simple description of (1) the skeleton; (2) the organs of digestion and excretion; (3) the heart and its work; (4) the lungs and their work; (5) the skin and its pores. Cleanliness of skin, mouth, teeth, eyes and ears. Cleanliness of clothes, beds, house and cooking vessels. Fresh air and means of ventilation. Value of the different kinds of food; rules for eating. Water; the usual sources of contamination and the means of securing pure water. The need for exercise and sleep.

**Class VI.**

Revision of work previously done. Simple rules for care of the sick, arrangement of the room, rest and food. Precautions against sore eyes, malaria, cholera, small-pox, plague. Treatment of cuts, burns and scalds. Simple rules for care of small children and infants: sleep, bathing, clothing and feeding. Tuberculosis.

**UPPER MIDDLE SECTION.**

**Classes VII and VIII.**

The same course, as is prescribed in Hygiene for these classes for boys, with the following modifications:—

In class VII instructions in the care and training of small children to be continued, and the following to be added to the syllabus dealing with the care and training of children:—

Diet and preparation of food. Care of the eyes and teeth. Play and exercise. Training in habits of cleanliness, order, obedience and truthfulness.

The following further addition should be made to the syllabus for class VII:—

Simple rules for cleanliness for patient, changing sheets, choice of food and its preparation, taking temperature.

In class VIII instructions in the care of the sick to be continued.

NOTES.—1. The preparation of dishes suitable for invalids (sago, *khichri*, barley water, etc.) should be included in the instructions given in connexion with the care of the sick.

2. The teaching of temperance may be given along with the teaching of Hygiene.

**Books recommended for the use of teachers:—**

- (1) **गृहसंस्था** (Domestic Economy), by Lakshmi Dhar Bajpai (Tarun Bharat Granthawali Karyalaya, Daraganj, Allahabad).
- (2) **Shahrah Tandurusti or स्वास्थ्य रत्ना** (Rai Sahib Gulab Singh and Sons, Lahore).
- (3) **Personal and Domestic Hygiene for the School and Home**, by Mrs. Harold Hendley (Rai Sahib Gulab Singh and Sons, Lahore).

**Sewing.**

**LOWER MIDDLE SECTION.**

**Classes V and VI.**

Tucking and pleating.

To cut out and make up three garments, i.e.,

(i) *Pyjama* or petticoat.

(ii) *Kurta* or blouse.

(iii) Frock or boy's shirt.

*Optional.*—*Chikan* work; *karchobi* work; shadow work; waistcoat stitches; more advanced knitting.

**UPPER MIDDLE SECTION.**

**Classes VII and VIII.**

Two garments selected by the headmistress to be cut and made.

*Optional.*—*Chikan* work; *karchobi* work; English embroidery; drawn thread work; crochet; knitting.

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**SYLLABUS OF THE COURSES IN COOKING.**

(For girls.)

**LOWER MIDDLE SECTION.**

**Class V.**

Preparation of simple drinks, such as *sharbat*, tea, cocoa, etc. Making a fire, preparation of *roti*, *chutnies*, *raitas*.

**Class VI.**

Revision of previous work. Management of the kitchen: Preparation of *dal*, *bhat*, *tarkari*, and *puri* or meat (*sada gosht*).

**UPPER MIDDLE SECTION.**

**Class VII.**

Preparation of *puris*, *kachauris*, *bara*, *halwa*, *khir* and like dishes for non-vegetarians.

**Class VIII.**

Dishes for invalids, such as sago, *khichri*, barley, etc., and special dishes for feasts, including sweets.

## SYLLABUS OF THE COURSES IN SPINNING.

(For girls.)

### LOWER MIDDLE SECTION.

#### Classes V and VI.

Spinning yarn of 10 to 15 counts from ready made slivers on the *takli* and on the *charkha*.

Making up yarn into skeins (*lachhi*), calculating count of the yarn spun.

Judging the uniformity and strength of the yarn spun.

### UPPER MIDDLE SECTION.

#### Classes VII and VIII.

(a) Ginning. Carding. Making slivers.

Spinning yarn of 20 to 30 counts on the *charkha*.

Making up the yarn into skeins.

Calculating the count of the yarn spun.

Judging the uniformity and strength of the yarn spun.

(b) History and importance of the art of hand-spinning in India.

## SYLLABUS OF THE COURSES IN CALLISTHENICS.

(For girls.)

### Classes V to VIII.

As indicated in the following book :—

A Manual of Physical Education for Girls, by Miss Florence Salzer, Director of Physical Education, Isabella Thoburn College, Lucknow.

## SYLLABUS OF THE COURSES IN A SECOND VERNACULAR (HINDI OR URDU).

(For girls.)

### LOWER MIDDLE SECTION.

#### Class V.

*Reading*.—To read accurately at sight from the text-book; to explain the meanings of words and sentences; and to answer questions on the subject-matter of the reader.

*Writing*.—To write sentences to dictation from the text-book in Urdu or Nagri character. Copy-books to be shown.

**Text-book prescribed :—**

*Hindi*.—First half of lower Primary Girls' Reader, by M. B. Hill (Indian Press, Limited, Allahabad), annas 8; or Lower Primary Reader for Girls, Part I (Newal Kishore Press, Lucknow), annas 3 pies 6.

*Urdu.*—First half of Lower Primary Girls' Reader, by M. B. Hill (Indian Press, Limited, Allahabad), annas 8; or Lower Primary Reader for Girls, Part I (Newal Kishore Press, Lucknow), annas 3 pies 9.

**Class VI.**

*Reading.*—To read correctly at sight from the text-book; to explain the meanings of words and sentences; and to answer questions on the subject-matter of the reader. Recitation.

*Writing.*—To write sentences to dictation from the text-book in Urdu or Nagri character. Copy-books to be shown.

**Text-book prescribed:—**

*Hindi.*—Second half of Lower Primary Girls' Reader, by M. B. Hill (Indian Press, Limited, Allahabad), annas 8; or Lower Primary Reader for Girls, Part II (Newal Kishore Press, Lucknow), annas 4.

*Urdu.*—Second half of Lower Primary Girls' Reader, by M. B. Hill (Indian Press, Limited, Allahabad), annas 8; or Lower Primary Reader for Girls, Part II (Newal Kishore Press, Lucknow), annas 4 pies 6.

## APPENDIX.

(1) *Memorandum on the teaching of historical stories to classes V and VI and the type of stories in History that should be taught.*

The object of teaching historical stories in the lower middle classes of our schools is threefold.

In the first place the stories are a means of introducing to our boys and girls the heroes and heroines of India and of creating among them an interest in the achievements of their past and a pride in the history of their country. In the second place the stories are useful as an instrument of moral instruction for they influence the character of the young through the study of the examples of the lives of the great.

Thirdly, they develop in them the sense of time, of before and after and of continuity which is the basis of historical understanding.

The object of the stories is not to teach history as history for at this stage the boys are not able to appreciate the processes of social or political evolution or historical development nor are they able to appreciate properly the relations of cause and effect. Their interest is mainly human and romantic. What appeals to them is stir and movement, adventure, heroism and glory. They are at a stage when the constructive dispositions of the mind are beginning to grow strong and therefore they are beginning to become interested in discovery, invention and the structural framework of their society.

They are awakening from the dreamy ego-centric state of childhood and becoming aware of the great "other" and how they are related to it.

The fairy tales of children have therefore to make room for stories of real men and women, as these stories will in their turn make room for real history.

In order to achieve these objects it is necessary to consider the matter and form of the stories.

In so far as matter is concerned the aim should be to select those characters from history which constitute landmarks in the development of the people and they should not be confined to only one or two fields of activity. They should be chosen from kings, generals, statesmen, priests, religious reformers, poets, artists, scientists, philosophers, inventors and all those who have made valuable contribution to the culture and civilization of the people. These characters should belong to all known periods of history and should be arranged in a chronological order.

Their lives should be treated not in a strictly historical manner, but imaginatively. Legends may be used freely but discriminately, in order to emphasize the traits of character which have to be presented.

Then in dealing with the lives of the personages selected care must be exercised in describing those incidents of their lives and those aspects of characters which are likely to evoke a real emotional response so that they "will feel the splendour of heroism, the worth of unselfishness and loyalty to an ideal, and the meanness of cruelty or cowardice"; they will learn how the patriot has loved his country and how the individual has earned the gratitude of posterity.

No effort should be spared in excluding matter which is likely to promote feelings of communal bitterness and antagonism for the treatment of the history of India is easily liable to such perverse nature nor should have sordid, cruel and lustful stories any place in this scheme. With regard to the form of the stories it must be clearly understood that stories must be stories and not mere summaries of history. Their appeal must be to intellect through imagination and feeling. This is only possible if they are narrated in a vivid, racy and picturesque style. It is not necessary for this purpose to invent incidents and details or to introduce irrelevant and extraneous stuff for the sake of creating interest. What is needed is the element "which quickens imagination and gives life and reality to persons and events, whatever helps them to believe in the story and to see the actors in it as real men and women, the personal appearance of great men, their characteristic action and bearing at decisive moments, their recorded sayings". The legends which testify how they have stamped themselves on the popular imagination are all of value.

The matter of the stories should be historically sound, the description of men and events reasonably full and the narration impressive. The stories may be told by the teacher and may be dramatised and acted by the pupils, may be read aloud by the teacher and retold by the pupils and may be read silently and written out by the pupils. In teaching stories pictures, coins and other illustrative material should be used.

## (2) *Memorandum on the Teaching of Drawing and Handwork.*

The teaching of Drawing in the majority of our schools confines itself at present to the development of skill in copying from the flat, while the teaching of Handwork limits itself to the exercise of certain regulated manipulations necessary in the construction of a numbered and ordered set of models.

Such teaching makes a virtue of slavish imitation and discourages originality and the exercise of imagination. Most pupils show their dislike of its restrictions by giving up Drawing and Handwork at the earliest occasion and thus lose their opportunity "to learn by doing", others who possess a natural liking for draughtsmanship or craft are actually harmed by adherence to laborious copying and so do not even become accurate copyists as, in attention to reproduction of details, they fail to grasp the vision of the whole.

"To-day the best teaching is based on the real wants of the child, who, coming into a strange world, must needs learn its ways, the meaning and use of the things he sees, their relation to each other and to himself, and something of the joy and beauty of life.

"The keynote of the best teaching to-day is development of mind of the student, so that not only shall his powers be trained, but he shall be inspired to put forth the very best that is in him. To this end he is encouraged to seek for and to discover the reasons for all he sees and for all that he is asked to do, so that with full understanding of his object and of means of attaining it, he may exert his whole force without haste and without waste." Thus we come to the study of structure with a purpose in nature and in art as a common basis for work in the drawing class room and the manual work room. No longer do we teach the pupil to copy the leaf or its representation on the black-board, we want him first to ask "why is the leaf built thus? Why is it thus attached to the twig, the twig to the branch and the branch to the parent stem? Why does the craftsman use such and such a joint in pottery and such another in wood? What is the virtue of the round or of the pointed arch in building? How do these colour effects arise, and with what combination of pigments can they be represented?" This is a real training of the mind and eye in searching for truth and of the mind and hand in expression of the truth discovered. With such a principle underlying the teaching, correction is not merely a shortening here or a lengthening there, but a criticism of the pupil's capacity for analysis and synthesis, and estimate of their powers of observation and construction.

If the teacher of drawing or handwork can establish in the minds of his pupils a sense of the relation of the part to the whole he has done a service to the pupils themselves and to his colleagues in education that cannot be estimated. Such a sense connotes an appreciation of position, direction and proportion—the ideal Euclid, with his point, line and space—the desideratum of the Geography students in the study of distributions on the world surface and on the map. He has done more, for it is the sense of relation and proportion that makes the useful citizen.

No longer therefore may the Drawing Master and the Manual instructor segregate themselves in their own particular class rooms; they must consider their work as closely related to the work in every other room in the school. They will then have little difficulty in correlating the different sub-divisions of their own subjects. Object drawing, nature and plant drawing, colour, design, handwork, memory drawing and imaginative work may be temporarily differentiated for purposes of class teaching, but they are all closely linked together. "They form a unity to which each part is to some extent essential." It is for the teacher to see that in the manual work and art rooms these relations are not sacrificed to the mere achievement of facility in the manipulation of the tools or of the media of instruction: it is for him to keep ever in view the ultimate aim of his teaching and to eliminate all that is purposeless. To teach perspective as a mere trick of drawing, to practise design without any idea of decoration, such are the mistakes of the past which are to be avoided in the future. This does not mean that technique is to be neglected, but that it is to be treated as a means to an end.

India is the home of design, and yet this branch of work in the drawing and manual work class room of our secondary schools has been neglected more than any other. The curriculum now offered for the Middle classes gives opportunity for purposeful design that should have the most valuable results, if it can be carried out in practice by teachers in a full spirit of co-operation.

A successful teacher of Drawing and Handwork has given the benefit of his experience in the following brief maxims for teachers :—

- (1) Awaken curiosity, arouse interest and teach the child to see things as they actually appear, and ultimately to appreciate what is beautiful.
- (2) Retain interest by variety of work and study of the individual child, sacrifice the chair of comfort to the needs of your pupils and be always moving about among them, directing here, correcting there, always helping.
- (3) Give assignments to the class and to individuals just within their capacity, sufficiently difficult to call for exercise of effort, but not so difficult as to create despair. In this way develop co-ordination of mind and muscle, as well as capacity to attempt a task with the certainty of winning through.
- (4) Make your pupils realize that for you yourself Drawing and Handwork are real vital interests, and by your own personality awaken enthusiasm in them.
- (5) Train your pupils so that they may find in Drawing and Handwork a profitable and pleasurable recreation for leisure hours throughout their life.

### (3) Memorandum on Physical Training and the teaching of Hygiene.

1. *Physical Training.*—In carrying out the school's course in physical education, the teacher should keep in mind the close relation of this course to the lessons in hygiene taught in the respective classes.

Exercises should, as far as possible, be held out of doors. At all times teachers should strive for correct carriage, both in sitting and in walking and also in standing. By developing the ideal of good posture through literature, pictures and examples from among both children and adults, this standard will best be attained. No exercise is beneficial if the child is allowed to stand with drooping head and flattened chest.

Exercises involving large groups of muscles take more than those involving the small groups: a body movement must be made more slowly than an arm movement. Respiratory exercises especially should be given slowly, with a slight pause at the end of expiration, never at end of inspiration, since holding the breath is bad for the circulation.

It is a good plan to have a two-minutes period of vigorous running or a fast game at about the middle of the morning session, and again as a break in the afternoon session, in addition to a regular ten-minutes exercise period towards the middle of the day.

In all exercises give commands sharply, cheerily, and vigorously. The strength of the reaction largely depends on the spirit of the command. There are two kinds of command: (1) The *preparatory* command, which tells what is to be done, and (2) the command of *execution* which starts the action. There should be a sufficient pause between the preparatory command and the command of execution for the pupil to understand what he is to do. The command must be distinct and animated, but should not be shouted: the degree of loudness required will depend upon the size of the class and the competing noises of the school's environment.

Marching should be included throughout the course, and wherever possible this should include figure marching—so valuable for the development of rhythm, co-operation, and attention.

Those games should be emphasized that provide (1) fairly strenuous exercise, (2) combined with much scope for team work, (3) for a considerable number of players, (4) in a reasonable time, and (5) without unduly heavy expenditure on grounds and equipment. Inter-class and inter-school sports should be encouraged, and here the emphasis should be put on loyalty to one's school rather than on piling up points for the individual.

2. *Hygiene.*—Hygiene is not yet, and probably never will be, a conventionalized subject, with a static and traditional content. It therefore becomes necessary for each teacher to review the possibilities, and with the limitations of his situation clearly in mind to formulate a plan of work which for him shall seem most promising of good results.

Facts and ideas that are taught with conviction will have much more effect than any amount of scientific baggage that is loosely grasped by the teacher himself, and not part and parcel of his own thinking.

It does no good to conduct a class in hygiene in a foreign jargon of scientific terms and alien ideas. Sanitation cannot be profitably discussed in an insanitary school building except as part of a programme to put things right then and there. A bookish discussion of fresh air in an ill-ventilated class room does harm rather than good. The study of hygiene must issue in practically increasing the physical efficiency of the pupils and the families from which they come.

The teacher should invite medical inspection and give intelligent obedience to expert direction. He must impress upon his pupils the utter futility of quacks and nostrums, and make clear what the scientific physician *can* do, and what he cannot do. He should aim to have all his pupils leave school with more interest in the *prevention of disease* than in its cure.

#### (4) *Memorandum on the teaching of Domestic Science.*

The purpose with which the course in Domestic Science is included in the curriculum must be borne in mind in determining the methods of instruction to be adopted. This purpose is to ensure that the pupils may acquire the art of healthy living, and also skill in various activities which are essential in home life. It is evident therefore that in every branch of the subject the instruction must be made as practical as possible, and that every opportunity must be taken to form habits in accordance with the principles that are taught. Unless this is done the course of instruction will leave no permanent impression on the pupils.

The course as prescribed includes the following subjects:—Physiology, hygiene, first aid, home nursing, home management, sewing and cooking. Detailed suggestions for dealing with these are given below:—

*Physiology.*—The teaching of physiology should be regarded as a preparation for the better understanding of the principles of hygiene. The subject should therefore be treated in outline only, special attention being given to those parts of the subject which are necessary for this purpose. A very simple course is prescribed for the Lower Middle Section, while that for the Upper Middle Section is somewhat fuller, but even in the latter no attempt should be made at a detailed treatment. In both full use should be made of illustrative charts and diagrams and the pupils should themselves be required to draw diagrams.

*Hygiene.*—The teaching of the principles of hygiene must be postponed till the pupils have developed some power of reasoning, but before this stage is reached it is the duty of teachers to train their pupils in habits of healthy living through the discipline of regular duties, and to impress on their minds the essential rules of health in as simple and direct form as possible. Thus in the lower classes the teacher should train the children to be clean and orderly in their personal habits and should require them to help in keeping their class room and its surroundings clean and neat. In doing this he should make the children realize that they have duties in these matters not only to themselves but to their school-fellows and to their homes. The teaching given at this stage should be informal, and should not be made the subject of regular lessons. At the middle stage the pupils should be prepared to understand something of the principles on which the rules of health are based and the practice of healthy habits already established should be reinforced by an appeal to intelligence and reason. The principles taught should invariably be illustrated by reference to the conditions of the pupils' own lives and they in turn should be required to give illustrations drawn from their own experience. The same method of teaching should be followed in the higher classes, though as the pupils advance in reasoning power the principles of the subject should be explained more fully, and their application worked out in greater detail, especially with regard to the duties of the individual to society.

*First-aid and Home Nursing.*—The teaching here must be practical as far as it is feasible. Thus in first-aid each pupil must practise simple bandaging, etc., and demonstrations should be given of the methods of treating minor accidents. In nursing the pupils should have actual practice in the arrangement of a room in case of sickness, in changing sheets, taking temperatures, etc.

*Sewing.*—Sewing is not only a useful art of definite value in the home, but it provides an outlet for constructive power and artistic feeling and a valuable source of enjoyment for leisure time. In order that the subject should have its full value all these possibilities should be borne in mind in planning the work of the different classes.

In the early stages the chief aim is to give the children some skill in the simpler processes of sewing. They should be given materials which they can handle easily (soft firm cloth, large needles, smooth thick thread in bright colours), and they should make large stitches which should increase in regularity as the result of practice. Decorative stitchery (large coloured sewing combining construction and ornament) is particularly suitable here. Even at this stage, however, all the work done should serve some practical purpose, and the children should help in the planning, measuring and fixing of the articles they make, e.g., a child can make a sheet for a doll's bed and herself measure the bed and make allowance for hems, etc.

In the middle and high stages the work should become more advanced in character. The standard of workmanship should improve steadily in each class till the stitching becomes rapid, even and fine, and the finish of each detail careful and thorough. Emphasis must be laid on the latter point owing to the general failure to realize its importance. The proper methods of mending should now be taught and pupils should be encouraged to bring garments of their own on which to practise these. Increasing emphasis should be given to the training of the pupils in the planning and cutting out of garments; and whatever method of teaching pattern-making is adopted, there should be definite instruction on the parts of the pattern and their relation to the human figure, based on careful observation by the girls themselves. As far as possible the pupils should have some freedom of choice of materials in order that their judgment and taste may be trained.

At all stages it is desirable to show pupils finished examples of the articles which they are learning to make. The study of good models is almost the only way in which good standards of taste and workmanship can be formed.

(5) *List of books on methods of teaching in Anglo-Vernacular Boys' and Girls' Schools, recommended for the guidance of teachers :—*

1. Of general value :—

The village Teachers' Journal. Ten numbers a year. Published in English and Urdu editions by the Village Teachers' Training Institute, Moga, Punjab, at Rs. 2-8 a year. Hindi edition from the North India Tract Society, 18, Clive Road, Allahabad.

A Primer of School Method, by T. F. G. Dexter and A. H. Garlick. Longmans. 5s.

A Curriculum for the Community Middle School, by Edith B. King and Earl L. King, Methodist Publishing House, Madras, 1924. Pp. 148. Loose leaf covers. Rs. 3. Very valuable.

The Course of Study of Baltimore County Public Schools. Published by Warwick and York, Baltimore, U. S. A. 1921. Pp. X, 698. Very full and helpful details as to the best ways of teaching each subject in each standard.

Instruction in Indian Secondary Schools, by A. H. Mackenzie, Published by Oxford University Press, Rs. 6-3.

Foundations of Method, by W. H. Kilpatrick. Macmillan, 1925. Pp. 383, \$2.00.

Village Schools in India, by Mason Olcott, Association Press, 5, Russell Street, Calcutta, 1926. Pp. xi, 235. Paper, Re. 1-8.

Modern Elementary School Practice, by George E. Freeland. Macmillan, 1919. Pp. 406. \$1.60.

The Class-room Teacher, by G. D. Strayer and N. L. Engelhardt. American Book Company, 1920. Pp. 400. \$1.48.

Suggestions for the consideration of Teachers. His Majesty's Stationery Office. Schools with a Message in India, by D. J. Fleming. Oxford University Press, 1921. Pp. 209. 5s. Also in cheaper paper edition.

School Management and Methods of Instruction, by G. Collar and C. W. Crook. Macmillan. 4s.

Class room Tests, by C. Russell, Ginn, 1926. Pp. 346. \$1.60.

- General Methods of Teaching in Elementary Schools, by S. C. Parker, Ginn. London, 1919. 8s. 6d.
- Brief Guide to the Project Method, by James G. Hasic and Sarah Chase. World Book Company, New York, 1924. Pp. X, 243. \$1.80.
- The New Examiner, by P. B. Ballard. Hodder and Stoughton, London; Longmans, Calcutta, 1924. 6s.
- How to Teach, by Strayer and Norworthy. Macmillan, 1917. 8s. 6d.
- Modern Developments in Educational Practice, by Sir John Adams. University of London Press, 1922. 6s.
- Research for Teachers, by B. R. Buckingham. Silver, Burdett and Company, 1927.
- Educational Movements and Methods. Edited by Sir John Adams. Harrap.
- Outlines of Child Study. Edited by Benjamin C. Gruenberg. Macmillan, 1918.
- The Project Method, by W. H. Kilpatrick. Macmillan, London. 1s.
- A Project Curriculum, by M. E. Wells. Lippincott, London. 1919. 8s. 6d.
- The Child, His Nature and His Needs. Edited by M. V. O'Shea. Pp. 516. The Children's Foundation. Valpariso, Indiana, U. S. A., 1924. \$1.00.
2. The Teaching of English :—
- The Teaching of English in India, by H. G. Wyatt. Oxford University Press Bombay, 1923. 3s.
- Self-Help Methods of Teaching English, by J. W. Wohlfarth. World Book Company, New York, 1926. Pp. 294. \$1.88. Concrete, practical help on class-room problems and procedure in elementary English.
- Teaching Primary Reading by the Story Method, by W. J. McKee. Christian Literature Society, Madras, 1924. Pp. 101. Annas 5. (Edition in English.) This is the best guide to the teaching of reading in Indian that are now available: most of the contents are equally applicable to middle school and to primary school.
- How to Teach Handwriting, by F. N. Freeman and M. L. Daughterty. Hugh-ton Mifflin Company, 1923. Pp. 305. \$1.80.
- The Direct Teaching of English, by P. C. Wren. Longmans.
- The Teaching of Modern Languages and the Training of Teachers, by Karl Breul. Cambridge University Press. 5s.
- The Teaching of English in the Far East, by Lawrence-Faucett. World Book Company, New York, 1927. Pp. xvi, 220. \$1.80.
- Memorandum on the Study of Languages: Scotch Education Department. Wyman and Sons.
- Teaching the Mother Tongue, by P. B. Ballard. Hodder and Stoughton. 4s. 6d.
- Clear Speaking and Good Reading, by Burrell. Longmans.
- Through the Gateway. Compiled by Florence Brewer Boeckel. Published by the National Council for Prevention of War, 532 17th St., N. W. Washington, D. C., U. S. A. Pp. vii, 118. \$50. A splendid collection of supplementary stories and poems, pageants and plays, games, and projects of good will, with a classified bibliography and a list of sources of material. Nine-tenths of the material is as useful in India as in America.
- Principles of Language Study, by Harold E. Palmer, Harrap. Pp. 224. 6s. See also references on Silent Reading under Urdu and Hindi.
2. The Teaching of Urdu and Hindi :—
- Silent Reading, by J. A. O'Brien. Macmillan, 1921. Pp. 229. \$1.72.
- Essential Principles of Teaching Reading and Literature, by S. A. Leonard. Lippincott, 1922. Pp. 460. \$2.00.
- One Hundred Ways of Teaching Silent Reading, by Nila Banton Smith. World Book Company, New York. Pp. x, 149. \$1.40. Well-organized, classified exercises for all standards, for the teacher's immediate use.

Teaching Primary Reading by the Story Method, by W. J. McKee. Edition in Urdu available from the office of *The Village Teachers' Journal*, Moga, Punjab. The best inexpensive handbook for the teacher of reading available in Urdu.

Teaching Primary Reading by the Story Method, by W. J. McKee. Hindi edition. Christian Literature Society, U. P. Branch, Allahabad, 1927. Pp. 135. Annas 6.

4. The Teaching of Mathematics :—

The New Methods in Arithmetic, by E. L. Thorndike. Rand McNally, 1921. Pp. 260. \$1.50.

The Teaching of Arithmetic, by D. E. Smith, Ginn, London. Pp. 196. 5s. 6d. Memorandum on the Teaching of Arithmetic. Scotch Education Department, Wyman and Sons.

The Teaching of Mathematics in Secondary Schools, by Arthur Schultze. Macmillan, 1912.

A History of Elementary Mathematics with Hints on Methods of Teaching, by Florian Cajori. Macmillan. \$2.25.

An Arithmetic for Teachers, by William F. Roantree and Mary S. Taylor. Macmillan. \$2.50.

The Thorndike Arithmetic. Rand McNally and Company, Chicago. Book I, \$.70; Book II, \$.80; Book III, \$.90. Three books covering Arithmetic through the middle school, edited by the famous educational psychologist. These books will be very suggestive for wide-awake teachers in India. They have already been translated into Spanish, Chinese and Japanese.

Social Arithmetic, by Frank M. McMurray and C. E. Benson. Macmillan, 1927. Book I, \$.88; Book II, \$.96; Book III, \$1.08. This is one of the most improved American Arithmetic series: it will prove helpful to teachers in securing a healthy motivation for arithmetic, by suggesting facts in which children are naturally interested, from industry, commerce, health and government, for quantitative study.

5. The Teaching of History :—

The Teaching of History in Elementary and Secondary Schools, by Henry Johnson. Macmillan, 1925. Pp. xxix, 497. 8s. 6d.

The Teaching of History and Civics, by H. E. Bourne. American Teachers' Series.

The Relations of Geography and History, by H. B. George, 5th edition. Edited by O. J. R. Howarth. Oxford University Press, 1924. Pp. viii, 330. 5s.

The Teaching of History in Junior and Senior High Schools. Ginn, 1921. Pp. 294. \$1.48.

Making History Graphic, by D. C. Knowlton. Scribners, 1925. Pp. 154. \$1.60.

6. The Teaching of Geography :—

Geography in Schools, by James Fairgrieve. University of London Press.

The Teaching of Geography in Elementary Schools, by Archer, Lewis and Chapman. A. and C. Black, 1918. Pp. 253. \$1.60.

"Bhugol" The Hindi Journal of Geography. Edited by Pandit Ram Narain Misra. (Monthly.) The Indian Press, Allahabad, Rs. 3 a year.

Geography, formerly "The Geographical Teacher." The Magazine of the Geographical Association, Central Office: Marine Terrace, Aberystwyth, Wales. Affiliated Associations in India. Membership including the three numbers of the magazine a year: 5s.

The Journal of Geography. Organ of the National Council of Geography Teachers (U. S. A.) Nine issues a year. Published by A. J. Nystrom and Company, 2249, Calumet Avenue, Chicago, U. S. A. Membership in the Council, including the Journal, \$2.00 a year, plus \$.27 foreign postage.

Stamps, by J. N. Hollister. Published by the Methodist Publishing House, 19, Mount Road, Madras. Annas 4. A handy little booklet, telling about the hobby of postage stamp collecting, and showing how the Geography teacher may use it among his pupils.

Principles and Methods of Teaching Geography, by F. L. Holtz. Macmillan, 1913. Pp. 371. \$1.60.

7. The Teaching of Drawing :—

The Teaching of Drawing : Its Aims and Methods, by Solomon Polack and H. C. Quilter. University Tutorial Press. 3s. 6d.

The School Arts Magazine. Published by the School Arts Press, Worcester, Massachusetts, U. S. A. \$3.50 a year. Also see the Portfolios, such as "Animals and Toy Drawing" by the same publishers.

See also the sections on Drawing and Fine Arts in *The Course of Study of Baltimore County Public Schools* under the General list above.

8. The Teaching of Manual Training :—

Manual Training for Secondary Schools in India, by A. H. Mackenzie. The Indian Press, Allahabad.

Industrial Arts for Elementary Schools, by Bonser and Mossman. Macmillan.

See also the sections on Manual Training and Industrial Arts in *The Courses of Study of Baltimore County Public Schools* listed under books of general value.

9. The Teaching of Classical Languages :—

The Classical Investigation Report, Vol. 1. American Classical League. Published by the Princeton University Press, 1924. Pp. 305. Contains detailed suggestions for improvement in the teaching of Greek and Latin, largely applicable to Sanskrit and Persian.

10. The Teaching of Nature Study and Elementary Science :—

The Teaching of Science in the Elementary School, by Gilbert H. Trafton. Houghton Mifflin. Pp. 293. 1918. \$1.75.

Memorandum on Nature Study and Teaching of Science in Elementary Schools, Scotch Education Department, Wyman and Sons.

Treecraft for Young India, by E. L. King. Epworth League Central Office, Jubbulpore, 1925. Pp. 41. Notebook to accompany the same. Pp. 48. Re. 1-4 for both together.

Birdcraft for Young India, by Joseph Ross and E. L. King. Epworth League Central Office, Jubbulpore, 1923. Pp. 86. Annas 10.

Bird Study in India, by M. R. N. Holmer. Oxford University Press, 2nd edition, 1926. Pp. 148. Rs. 3.

Birds of an Indian village, by Douglas Dewar. Oxford University Press, 1924. Pp. viii, 132. Rs. 2. Available also in Urdu edition.

11. The Teaching of Physical Training and Hygiene :—

Scouting for Boys in India, by Sir R. Baden Fowell. Pearson, London, 1924. Rs. 2-8.

Handbook for Scoutmasters. Boy Scouts of America, New York. Latest edition. \$1.50.

Medical Instructions to House Fathers, by D. N. Forman, M.D. Published by College Bookstall, Ewing Christian College, Allahabad City, 1925. Pp. 22. Annas 4. Detailed and practical.

A Manual of Physical Education for Girls, by Miss Florence Salzer. Published by Isabella Thoburn College, Lucknow.

Indian Games Handbook. Compiled by J. H. Gray, M.D., Triangle Athletic Series. Association Press, Calcutta, 1918. Pp. 26. Annas 3.

Let's Play by E. L. King. Epworth League Central Office, Jubbulpore. Pp. 28. Rules for 101 games, with hints on how to teach games. Most of the games require little or no equipment. Annas 8. Also available in a Hindi edition called "Khel Khud," from the Methodist Publishing House, Lucknow.

- Education by play and games, by G. E. Johnson. Ginn. Pp. 248. \$.90.
- Playground and School Compound Games. Compiled by J. H. Gray, M.D. Triangle Athletic Series. Association Press, Calcutta, 1918. Pp. 25. Annas 3. Rules for relay ball, informal and tag games involving little expense.
- Army and Navy Athletic Handbook. Prepared by G. J. Fisher, M.D., Association Press, New York, 1919. Available from the Association Press, Calcutta. Pp. 391. Annas 8. Rules for all the major sports, efficiency tests, swimming, and a large amount of other useful material.
- A Primer of Tropical Hygiene, by Colonel R. J. Blackham. G. Claridge and Company, Caxton House, Bombay. Latest edition. Pp. 154. Re. 1.
- Indian Manual of First-aid, by Colonel R. J. Blackham. G. Claridge and Company, Caxton House, Bombay. Latest edition. Pp. 196. Re. 1-4.
- Indian Home Nursing, by Colonel R. J. Blackham. G. Claridge and Company, Caxton House, Bombay. Latest edition. Pp. 236. Re. 1-4.
- Games and Recreational Methods, by C. F. Smith. Dodd, Mead and Company, New York, 1924. \$2.00.
- Health Posters of the United Provinces Public Health department, Lucknow.
- Publications of the Lady Chelmsford Child Welfare League, offices in Delhi, Simla and principal cities (Hindi, Urdu, English), on loan.
- Lantern slide lectures to be obtained from the United Provinces Health department, the Lady Chelmsford League, the United Provinces Lantern Lecture Committee (Allahabad), and the Provincial Museum (Lucknow) on terms that may be learned on application.
12. The Teaching of Music :—  
Indian Music by H. A. Poply. Heritage of India Series. Association Press, 5, Russell Street, Calcutta. Paper, Re. 1-8.

(6) *List of books recommended by the Board for libraries and prizes.*

**English.**

1. Tales of India. (Macmillan & Co.).  
(Book no. senior 7 and Int. 16 & 17).
2. Stories of Islam, Books I—V (Longmans, Green & Co.).
3. Longman's Easy Indian Stories (6 vols. viz. A King's Adventure; The Merchant's Daughter; The Two Friends; The Adventures of a Prince; The Four Sisters; A Prince, A Rat and A Ring).
4. Indian Folk Tales (Grade I), Parts I and II (Longmans, Green & Co.).
5. Shakespeare retold for Little People, 3 vols. (As you like it; The Tempest; A Midsummer Night's Dream). (G. Bell & Sons, Ltd.).
6. Picture Composition, Parts I to III (Blackie & Son, Ltd.).
7. Some Great Lives of Modern India (Longmans, Green & Co.).
8. Wonder Tales from Every Land Series, the Potter, the Tiger and much more; the boy without fear and other lands; and Russian Tales of Might and Magic (Oxford University Press).

**Hindi.**

1. Manohar Sachchi Kahaniyan (National Press, Allahabad).
2. Mahadeva Govind Ranade (Tarun Bharat Granthavali Karyalaya, Allahabad).
3. Prithi ki Parikrama (Indian Press, Ltd., Allahabad).
4. Adbhut Maha Purush } (Rai Sahib Ram Dayal Agarwala, Allahabad).
5. Dirashya Kunj }
6. Maharashtra Kesari (Ram Prasad & Bros., Agra).

**Hygiene.**

1. Swasthya Samlap, by Krishnanand Gupta (Sahitya Sadan, Chirago, Jhansi).
2. How to live 100 years, by Kedarnath Gupta (Chhatra Hitkari Pushtakmala, Daraganj, Allahabad).

**Urdu.**

1. Ram Charcha (Lajpat Rai and Sons, Lahore).
2. Anokhay Jadugar (Rai Sahib Ram Dayal Agarwala, Allahabad).
3. Ba Kamalon ke Darshan (Lala Ram Narain Lal, Allahabad).
4. Shahrah-e-Sehat (Ram Prasad & Bros., Agra).

**Cooking.**

Pak-Vidya (the Art of Cooking), (Ram Narain Lal, Allahabad).

**History.**

The Story of India, Parts I to III (Macmillan & Co.).

**Domestic Science.**

1. Salaiyo-Se-Bunna (Hindi and Urdu), (Rai Sahib Ram Dayal Agarwala, Allahabad).
2. Mahila Vyavahar Chandrika (Rai Sahib Ram Dayal Agarwala, Allahabad).
3. Silai Darpan (Hindi and Urdu), (Rai Sahib Ram Dayal Agarwala, Allahabad).



Register no. A388.



SUPPLEMENT  
TO THE  
**Government Gazette,**  
THE UNITED PROVINCES OF AGRA AND OUDH.

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ALLAHABAD : SATURDAY, MARCH 26, 1932.

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**PART IV.**

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CURRICULUM FOR THE INFANT AND PRIMARY  
CLASSES OF ANGLO-VERNACULAR BOYS' SCHOOLS,  
UNITED PROVINCES, FOR 1932-33.



**CURRICULUM FOR THE INFANT AND PRIMARY CLASSES  
OF ANGLO-VERNACULAR BOYS' SCHOOLS, UNITED  
PROVINCES, FOR 1932-33.**

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**PREFATORY MEMORANDUM.**

Head Masters and Managers are permitted, with the approval of the Inspectors, and in conformity with the general principles that underlie the curriculum, to make modifications in the classwise distribution of the work in any subject.

Object lessons prescribed in the curriculum as *optional* subjects from class II downwards should not be introduced into any school without the permission of the Inspector, who should satisfy himself that trained teachers are available and can be spared for teaching them. In no case should the work be entrusted to untrained teachers.

The teaching of English by the Direct Method should not be attempted except by specially trained teachers. Where such teachers are not available in sufficient numbers for all classes, a teacher or teachers, qualified to give such instruction, might be employed to supplement the ordinary class teaching by taking classes separately for an hour or so a week each.

Informal teaching on the subject of good manners should be given in all classes.

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**ABSTRACT FROM THE MEMORANDUM ON HOME LESSONS.**

*(Issued under the authority of G. O. no. 790/XV—212, dated August 19, 1910, Educational Department.)*

(1) The aim in setting home lessons should be that a boy should be able to prepare his tasks thoroughly, and yet have sufficient spare time to devote to healthy recreations, mental and physical of his own choice.

(a) In the Lower Primary and Preparatory Sections no home lessons should be set at all. If the school hours are properly utilized, there is ample time for the teacher to teach and for the scholar to learn and apply what he has been taught.

(b) In the Upper Primary Section the approximate time to be devoted to home lessons should not exceed *one* hour.

(2) Home work should not be exacted from a scholar in too many subjects on the same day, nor too much in one subject. In this matter the Head Master must exercise controlling authority over the class

teachers. He should enquire from them, from time to time, what amount of work is set in the various subjects, and should see that too much time has not to be given to the study of one subject at the expense of another.

(3) Home work is one of the most important means whereby the student can be trained in the habit of doing things for himself. It must be something which he can accomplish on the basis of what he has learnt in school, not something beyond his powers which necessitates recourse to the assistance of a private tutor. A boy who is always being helped in the preparation of his home work by a private tutor loses confidence in himself and the habit of doing things independently. Moreover, work which is the result of collaboration with a private tutor, affords no criterion of the boy's capacity, progress or industry.

(4) Home work should be not only such as can be done without assistance but such as implies effort. It should never be a merely mechanical exercise which involves no intellectual exertion. It should not, for example, consist of the transcription of "rough" work done in school. Under the influence of unsound tradition there has been and still is much waste of labour in this way. Such work is manual, not mental, and should be altogether unnecessary for boys who have been trained in habits of neatness and accuracy.

(5) It cannot be expected that boys should break much new ground for themselves. They should, therefore, be almost exclusively occupied in going over the ground already covered in class, and this work of assimilation should be tested by the teacher at the beginning of a fresh lesson. It may therefore be laid down as a general rule that written exercises upon matter not already taught in school should rarely be set in the Upper Primary section. The work at home should take the form of recapitulating the work done in the day and of training the memory, which at this stage may be most usefully exercised. But since scholars cannot be expected to take much interest in what they find neglected by the teacher, written exercises should be punctually corrected and returned to them as soon as possible. It is most important that the work of this nature should never be allowed to fall into arrears.

(6) There is a tendency to relegate too much written work to out-of-school hours. It cannot be too strongly emphasized that the best means of training pupils to write clearly, to arrange their work neatly, and to take pains is to insist on these points in class note-books used in school under the eye of the master. There is plenty of time in school for written work of the nature of applying knowledge, if the teacher arranges his lessons properly. It may, in fact, be laid down as an almost invariable rule that no written work should be set as part of home lessons in the following subjects:—Arithmetic, original composition and nature study and elementary science, nor should work be set in copy-book writing, in drawing or in elaborate map-making.

# **CURRICULUM FOR THE INFANT AND PRIMARY CLASSES OF ANGLO-VERNACULAR BOYS' SCHOOLS FOR THE SESSION BEGINNING IN JULY, 1932.**

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## **SUBJECTS OF STUDY.**

NOTE.—In the preparatory and lower primary sections the teacher will give practical instruction in hygiene by seeing that the boys' bodies, hair, nails, teeth and clothes are clean; that their hair is free from nits; that the boys keep their nails short and do not bite them; that boys whose sight is not good are not required to strain their eyes but that the parents are advised to provide them with spectacles; that the parents of boys whose teeth are carious are advised to take the boys to a dentist; that clean pure drinking water is available; that the class-room is clean, tidy and well-ventilated and that the boys help to keep it so. The teacher should himself set an example of healthy living.

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## **PREPARATORY SECTION.**

### **INFANT CLASS A.**

1. Reading (Urdu or Hindi).
2. Writing (Urdu or Hindi).
3. Arithmetic.
4. Drawing.
5. Object Lessons (optional).
6. Drill.

### **INFANT CLASS B.**

1. Reading (Urdu or Hindi).
2. Writing (Urdu or Hindi).
3. Arithmetic.
4. Drawing.
5. Object Lessons (optional).
6. Drill.

## **LOWER PRIMARY SECTION.**

### **CLASS I.**

1. Reading (Urdu or Hindi).
2. Writing (Urdu or Hindi).
3. Arithmetic.

4. Drawing or Brushwork.
5. Object Lessons (optional).
6. Drill.

CLASS II.

1. Reading (Urdu or Hindi).
2. Writing (Urdu or Hindi).
3. Arithmetic.
4. Drawing or Brushwork.
5. Object Lessons (optional).
6. Drill.

UPPER PRIMARY SECTION.

CLASS III.

NOTE.—The teacher will give lessons on Hygiene, teaching the course given on pages 2 to 4 of the curriculum at least twice during the school year.

1. English.
2. Vernacular (Urdu or Hindi).
3. Arithmetic.
4. Geography.
5. Drawing or Brushwork.
6. Nature Study and Elementary Science.
7. Drill.

CLASS IV.

NOTE.—The teacher will give lessons on Hygiene and Temperance, teaching the course given on pages 4 and 5 of the curriculum at least twice during the school year.

1. English.
2. Vernacular (Urdu or Hindi).
3. Arithmetic.
4. Geography (General or Physical).
5. Drawing or Brushwork.
6. Nature Study and Elementary Science.
7. Drill.

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Outline Syllabus for lessons on Hygiene in Classes III and IV.

CLASS III.

Lesson 1.

*Cleanliness of the body.*—Necessity of cleanliness for our own sake and for others; danger of uncleanness to cuts and sores, objectionable smell from dirty children; dangers of handling food with dirty hands.

*Lesson 2.*

Care and appearance of the hair, need for frequent washing—the danger of nits. Care of nails—to be kept short and clean; not to be bitten.

*Lesson 3.*

Washing and how to wash properly; use of soap; warm water best for cleansing purposes; cold for tonic; face, neck and hands need most washing; whole body should be washed once daily.

*Lesson 4.*

Need for cleanliness of body inside as well as out; bowels should be moved at least once a day at a regular time, preferably in the morning. Lack of regularity an important reason for constipation, drink a glass of water before retiring for the night.

*Lesson 5.*

*Clothing.*—Need for change of clothing once a week; no clothing worn during the day should be worn also at night. Importance of tidiness.

*Lesson 6.*

*Fresh air and sunlight.*—The value of fresh air and sunlight; necessity of fresh air for lungs. Best air is out of doors.

*Lesson 7.*

*Breathing.*—Children should be taught how to breathe properly. Deep breathing is best and comes naturally when children run about; breathe through the nose. Nose to be kept clean. How to clean nose? Danger of mouth breathing; function of nose to warm and filter air.

*Lesson 8.*

*Sleep. Importance of rest.*—Importance of rest and sleep. Early to bed; how many hours' sleep are the children getting? Should have about 12.

Advantages of well-aired room, open window; important to have through current of air.

*Lesson 9.*

Do children sleep with open windows in winter? Do they have a fire or lamp in the room? Do they cover up their face and head? Say how ventilation should be secured in winter.

*Lesson 10.*

*Care of the teeth.*—The importance of teeth, the more they are used the better for them. How to keep teeth in good condition? A lesson in cleaning the teeth showing how to use the *datoon*.

*Lesson 11.*

Articles useful for cleaning teeth. What do children generally use at home for cleaning their teeth? When to clean teeth (best before going to bed and in the morning). Injurious effects of *pan* on teeth. Harmful effects of picking teeth with pins, sticks.

**Class IV.**

*Lesson 1.*

*Wholesome food and eating habits.*—Adequate nutrition is the best protection against illness and ensures a better and quicker recovery from fatigue. Children should be taught the values of food such as milk, fresh fruits, green vegetables and the bad effects of spices and too many sweets.

*Lesson 2.*

*Evils of intoxicants and drugs.*—What are the chief intoxicants and drugs people use? (Wine, opium and its various derivatives, hemp, *tari*, *charas*). Typical appearances of people who are addicted to various forms of intoxicants and drugs. Evil effects of each class of intoxicants and mental, physical and moral deterioration that ensues. Use of intoxicants ruinous to the peace and happiness of the family.

*Lesson 3.*

Meals should be regular in period of time; no food between regular meals, advantageous to drink water when thirsty and between meals but not much water *during* meals. Never drink with food in mouth; eat slowly, chew food well. Hands and face should be washed before meals.

*Lesson 4.*

Children should not eat dirty food, the remainder of what some one else has partly eaten or share glass or cup with other children; point out the danger of transmission of disease by this. Name diseases, that may be transmitted.

*Lesson 5.*

*Care of the eyes and ears.*—Children should at once tell their teacher if they are unable properly to see words in books or on the black-board. Need for good light on all work; not to bend over work or read or sew in a bad light.

Cleaning of the eyes. Use of the Boric acid.

*Lesson 6.*

Danger of putting any hard substance into ear; how to clean ear of accumulated wax?

*Common infectious diseases.*—Cause, manner of spread and protection against—

*Lesson 7.*

(i) Cholera.

*Lesson 8.*

(ii) Plague.

*Lesson 9.*

(iii) Smallpox.

*Lesson 10.*

(iv) Malaria.

*Lesson 11.*

(v) Hookworm.

*Lesson 12.*

*Domestic Hygiene.*—Proper storage of food and water in the house—manner of contamination of food and pollution of water.

*Lesson 13.*

*Cleanliness of towns and villages.*—Importance of proper disposal of refuse and manure, and of dejecta in house.

Books recommended for the use of teachers are :—

The First Laws of Health (a Health Reader for Indian Schools), by Lieutenant-Colonel Megaw (Oxford University Press, Calcutta, 1921). (Re. 1.)

Tandurusti ki Pahli Kitab, by Colonel J. W. D. Megaw, Indian Red Cross Society, Viceregal Lodge, Delhi. (12 annas.)

Swastha Raksha ke Prathamik Niyama (the Hindi version of Colonel J. W. D. Megaw's First Laws of Health). Indian Red Cross Society, Viceregal Lodge, Delhi. (12 annas.)

Sehat ki Kahani (Urdu translation of the Land of Health and the Land of Wealth), by E. Marsden, translated into Urdu by M. Abid Hasan Faridi and published by Macmillan & Co. (Re. 1.)

Hindi translation of "The Land of Health and the Land of Wealth", by Ram Narayan Misra, published by Macmillan & Co. (Re. 1.)

Hifzan-i-Sehat, Parts 1 and 2 in one volume in Urdu, by M. Rahmat Elahi Siddiqi, Sub-Assistant Surgeon, corrected edition, published by the Newal Kishore Press, Lucknow. (Rs. 2.)

Chart Rules of Health in Urdu, by B. J. Sahni, Lahore. Mounted on cloth with rollers. (Rs. 2-8-0.)

Elementary Hygiene for Beginners, by C. F. Wanhill (Blackie & Son). (14 annas.)

Alcohol and the Human Body, by Sir Victor Horsley and Mary D. Sturge (Macmillan & Co.). (3s. net.)

Alcohol and Life, by J. A. Hunter (Macmillan & Co.). (1s. 6d.)

Manual of Temperance (Urdu or Hindi), by M. Mewa Ram, B.A., late Inspector of Schools, Jhansi division. (6 annas each.)

Aroga Dig Darshan, by Mahatma Mohan Das Karam Chand Gandhi, published by Narain Dutt Sahgul & Sons, Booksellers, Lahore, 1st edition. (12 annas.)

Lower Swasth, by Sriyut Bimal, published by Narvadeshwar Pustakalaya, Babura, Shahabad, 1925 edition. (2 annas.)

Hygiene Yani Hifz-i-Sehat, Parts I—IV, by Rai Sahib Dr. Daya Nidhan, 1st edition, published by the School Book and Apparatus Dépôt, 406, Fatehganj, Lucknow (Part I—6 annas, Parts II and III—7 annas each and Part IV—8 annas.)

Hygiene ya Swasthya Raksha ki Prarambhik Shiksha, Parts I—IV, by Rai Sahib Dr. Daya Nidhan, 1st edition, published by the School Book and Apparatus Dépôt, 406, Fatehganj, Lucknow (Part I—6 annas; Parts II and III—7 annas each and Part IV—8 annas.)

#### AIMS IN THE TEACHING OF ENGLISH.

The aims in the teaching of English are :—

A. *Practical*.—To enable the pupil—

- (1) to speak and read aloud English with correct pronunciation and some degree of facility;
- (2) to understand the language when spoken;
- (3) to write the language with grammatical correctness and with facility.

B. *Literary*.—To enable the pupil to read intelligently for pleasure modern English prose and poetry of moderate difficulty.

C. *Linguistic*.—To qualify the student by the systematic study of the structure of the language and by practice in its use for the further study of English literature.

**SYLLABUS OF THE COURSES IN ENGLISH.**  
**UPPER PRIMARY SECTION.**

**CLASS III.**

*Conversation and reading.*—The early stages of instruction will be mainly oral, and should include systematic training in the sounds of spoken English in connection with the pronunciation of easy words. By the end of the year the class should be able to carry on simple conversation about familiar objects and actions.

To read with correct pronunciation an easy primer, to use the words of the primer in simple sentences and to answer in English simple questions based on the matter in the primer.

*Spelling and writing.*—To spell the words of the primer; copy-writing in ruled books of easy familiar words, writing in copy-books (in the latter half of the course); dictation in ruled books of words and sentences previously read in the primer.

**CLASS IV.**

*Conversation and reading.*—To converse about common objects and actions, to read with correct pronunciation from a reader, to use the words of the reader in simple sentences and to answer in English simple questions based on the matter in the reader.

*Spelling and writing.*—To spell the words of the reader; dictation in ruled books of words and sentences previously read in the reader; writing in copy-books.

*Grammar and composition.*—Formal Grammar should be commenced; division of a sentence into two parts: subject and predicate. To point out nouns, pronouns, adjectives and verbs (without sub-classifications). Oral and written exercises in the above.

Easy written composition (at least once a week), i.e., completion of sentences.

## TEXT-BOOKS.

In Classes III and IV the following primers and readers are prescribed :—

Class.	Nelson's Readers.	Christian Literature Society's Readers.	Macmillan's Readers.	Tipping's Direct Method Book (Macmillan & Co.)	Longman's Readers.	The New Method Indian Readers (Gulab Singh & Sons).	Blackie & Sons.	The Indian Class Readers (K. and J. Cooper, Bombay).	George G. Harlap's Readers.
III	Primer.	Indian Readers Primers nos. I and II (4 annas each)	Rapid Reading Series, Primers I and II, by Llewellyn Tipping, published by Macmillan & Co., Ltd., Calcutta. (Part I, 4 annas and 3 pies; Part II, annas 6), or Conversational Readers, First Primer (3 annas) and Second Primer (3 annas), or Macmillan's Modern Indian Readers. The Primer. (1923 edition) (3 annas).	First Direct Method English Reader (5 annas).	Longman's English Course for Indian schools—1st year teacher's book (8 annas) (For teacher's use only), or English Made Easy, Book by J. C. Allen (5 annas). [Conversional Picture nos. 1-6 by J. C. Allen (Re. 1 each) are recommended for class use with the book] or the New Method Reader IA (Primer), by Michael West (6 annas).	..	The Star of India Readers. Book 1 (5d.); Indian Empire Readers (primer) (4 annas) 1927 edition; or The Koh-i-Noor Readers (Primers), by M. S. H. Thompson (5 annas).	Primer, by P. C. Wren (6 annas). Teacher's Handbook to the Primer of Indian Class Readers, by P. C. Wren. (For teacher's use only.)	A Child's First Reader, by A. M. Goode (3 annas) and A Child's Second Reader by A. M. Goode (3 annas).

Book I.	Book II.	Book III.	Book IV.	Book V.
Book I. (6 annas).	New English Reader I (5 annas), or Conversation-als Readers, Readers I and II (3 annas each), or Macmillan's Modern Indian Readers, Book I (5 annas).	Second Direct Method English Reader (8 annas).	1st Year Reading Book (4 annas) or the New Method Reader I B, by Michael West (6 annas).	Book I The Star of India Readers, Book II (7d.) New Indian Empire Readers, Part I, 1927 edition (6 annas); or The Koh-i-Noor Readers, Reader I, by M. S. H. Thompson (6 annas).
				Reader I, by P. C. Wren (7 annas). Teacher's Handbook to Reader I of Indian Class Readers, by P. C. Wren. (For teacher's use only.)
				..

Books recommended for the use of teachers:—

English for India, Books I and II, by T. O. Hodges, 1926 edition, published by Macmillan & Co., Ltd., Calcutta (Book I—3 annas & Book II—3 annas).

The English copy-books to be used are:—

Class.	Series.				
	Longmans, Green & Co.		Gulab Singh & Sons.	Blackie's Manuscript Writing copy-book.	Macmillan's Imperial copy-books.
III and IV	Upright.	3emi-Upright.	1, 2, 3, 4, (1 anna and 6 pies each).	1, 2, (3 annas each).	1, 2, 3, 4, (1 anna and 6 pies each).
	1, 2, 3, (Re. 1-8-0 per dozen).	2, 3, 4, (Re. 1-8-0 per dozen).	1, 2, 3, 4, (1 anna and 6 pies each).	1, 2, (3 annas each).	1, 2, 3, 4, (1 anna and 6 pies each).
					Oxford copy books (Oxford University Press, Calcutta).
					I, II, III, IV, (2 annas each).

AIMS AND METHODS IN THE TEACHING OF  
MATHEMATICS.

*Reasons for teaching Mathematics.*—We teach Mathematics with a twofold aim. On the one hand we use the subject as a means of developing the intelligence of the pupil; on the other hand we endeavour to make him skilful in such operations with numbers as are likely to be of practical use. Thus the teacher will endeavour to make clear to pupils the reasons which underlie processes, and will also train them to gain the power of rapid, accurate and confident calculation.

*Neatness and arrangement in written work.*—Great stress should be laid on neatness and care in arrangement. Errors in working can often be traced to slovenly arrangement or badly-formed figures. Pupils should be trained to arrange their work in a series of logical steps for each of which a reason can be given. Particular care should be taken in the early stages that units are not omitted, and that every line is a correct statement.

*Oral work.*—All new processes should be introduced and fixed in the mind by means of examples worked on the blackboard. These should involve only small numbers so that calculations may be performed without resort to pen and paper. Even after a new rule has been established "Mental Arithmetic" should be a feature of the most lessons. A few minutes given daily to the oral solution of problems is a valuable means of revising past work and in training pupils to gain rapidity and confidence in calculation. Up to class IV the teaching should be largely oral.

*Concrete illustrations.*—Wherever possible concrete aid should be used. In the earliest stages the various operations should be taught by means of illustrations with objects which can be easily procured, such as headless matches, nuts, etc. Tables of weights and measures should be visualized by measurements of lengths, areas, volumes, capacities and weights; pupils should be practised in estimating the weights of common objects, the heights of tables, rooms and buildings, the areas of surfaces, the capacity of vessels and the distances between fixed points in the class-room and play-ground, and should verify their estimates by experiments.

*Nature of examples.*—Once a rule has been learnt it should be applied to varied examples, both oral and written. Examples should, as far as possible, relate to matters within the experience of pupils, and the numbers employed should be such as are likely to occur in practice; thus although pupils should be made familiar with operations in British money, prices in problem should, as a rule, be given in Indian money. Operations with large numbers should be the exception, and when they are employed they should be taken from real life, census returns, statistics of trade, returns of revenue, etc. To test the grasp of a new process

and to connect it with what has been already learnt, it should be applied to problems which involve also the application of previous rules; thus no preceding rules should be allowed to drop out of sight.

*Revision.*—In no subject is revision more necessary than in Mathematics. As the mental machinery of pupils becomes somewhat rusty from lying up for the vacation, such revision is specially necessary at the commencement of each session.

*Text-book.*—Even the best text-book cannot take the place of the teacher. He has to expand the theory, which is usually a brief summary; he has also to provide the concrete illustration, to break down the artificial barriers which separate topic from topic, and to supplement the lists of examples by supplying oral questions and by inventing problems which are likely to bring the subject into close touch with the interests of the pupils.

## SYLLABUS OF THE COURSES IN ARITHMETIC.

### PREPARATORY SECTION.

#### INFANT CLASS A.

*Arithmetic.*—Notation and analysis of numbers in connection with concrete objects, as far as 50, and the writing of those numbers. Oral addition of any two numbers whose sum does not exceed 50, and subtraction of any two numbers neither of which exceeds 50. Simple oral problems in addition and subtraction. Construction and memorizing of tables up to  $5 \times 10$ .

#### INFANT CLASS B.

*Arithmetic—Revision.*—Notation of numbers as far as 1,000. Analysis of numbers as far as 100. Simple addition of numbers, the answer not to exceed 1,000. Simple subtraction of any two numbers neither of which exceeds 1,000. Construction and memorizing of tables up to  $10 \times 10$ . Simple multiplication by numbers not greater than 5. Simple oral and written problems in the above.

### LOWER PRIMARY SECTION.

#### CLASS I.

*Arithmetic—Revision.*—Notation extended to one lakh (1,00,000). The four simple rules with no term or answer exceeding one lakh. Construction and memorizing of multiplication tables up to  $16 \times 12$ . Addition and subtraction in Indian money with no term or answer exceeding Rs. 1,000. Simple oral and written problems in the above.

#### CLASS II.

*Arithmetic—Revision.*—Further extension of notation to crores and millions. The four compound rules and reductions in Indian money and weights with miscellaneous examples. Simple, oral and written problems in the above.

## UPPER PRIMARY SECTION.

## CLASS III.

*Arithmetic—Revision.*—Of the previous work with special attention to (i) the best methods of working, (ii) application to oral and written problems relating to things within the experience of the pupil; (iii) rapidity in oral work; and (iv) neatness and orderly arrangement in written work. The four compound rules and reductions in British money. Factors and prime numbers.

## CLASS IV.

*Arithmetic—Revision.*—G. C. M. or H. C. F. by factors. L. C. M. The four compound rules and reduction in British weights, and measures of length, time and capacity in common use, instruction to be as realistic as possible. The four simple rules in vulgar fractions with easy examples. Oral and written problems in the above.

## TEXT-BOOKS.

## Arithmetic.

The books recommended for use are :—

*Classes I and II.*—Vernacular Lower Primary Arithmetic (Urdu or Hindi), revised 1930 edition, revised by Chandra Mauli Shukla, published by P. C. Dwadesh Shreni and Co., Aligarh, (Urdu 8 annas, Hindi 6 annas); or Modern Vernacular Arithmetic, Book I (Urdu or Hindi), by Jwala Sahai Gupta, published by the School Book and Apparatus Dépôt, Lucknow; or Blackie's Arithmetic, Book I (Urdu or Hindi), by Ram Swarup Vaish, published by Blackie and Son; or Lower Primary Arithmetic for Vernacular Boys' Schools in Urdu or Longman's Vernacular School Arithmetic, Part I, in Hindi, by K. C. Bhattacharya, published by Longmans, Green & Co., Calcutta, (Urdu 9 annas, Hindi 8 annas); or Hindustani Ilmul Hisab or Hindustani Angkanit, Part I, by Salig Ram Varma, published by the Hindustani Book Dépôt, Lucknow. (Urdu, 8 annas; Hindi, 7 annas.)

*Classes III and IV.*—Anglo-Vernacular School Arithmetic for Classes III and IV (Urdu or Hindi), published by Ram Narain Lal, Allahabad (Urdu, 10 annas; Hindi, 9 annas 3 pies); or Modern Arithmetic, Part I, revised edition (Urdu or Hindi), published by the Indian Press, Allahabad (8 annas); or Model Arithmetic, Book I, revised edition (Urdu or Hindi), by Shyam Behari Lal Kapoor, published by the Agarwal Press, Allahabad. (8 annas each); or Hindustani Ilmul Hisab or Hindustani Angkanit, Part II, by Salig Ram Varma, published by the Hindustani Book Dépôt, Lucknow. (8 annas each.)

## Geography.

## AIMS AND METHOD IN TEACHING GEOGRAPHY.

Geography is on the one hand a study of the configuration of the Earth—its continents, seas, mountains, forests, rivers, etc.; on the other hand it is a study of the needs of man and how he makes provision

for these needs. Thus we only partly teach geography if we limit our teaching to a study of physical facts; the chief value of these facts is that they help us to understand how men live and work in different parts of the earth.

In studying a country consider it first as a whole—its general build, the long and short slopes of the land, the way in which rivers run, where there are large fertile tracts, where desert and where forests. Then in more detail the great mountain ranges, the chief river basins, the great plains, the climate, the population and occupations, the political divisions, the trade routes and towns. For each of these topics a separate map should be drawn on the blackboard and by the pupils.

The teaching should not be confined to a mere list of names. Facts are of value only if brought into relation with other facts. The teachers should point out why here there is a forest, there a desert, how the nature of the coast has promoted intercourse with other countries, how mountains have prevented intercourse, how rivers have promoted trade and density of population, what natural resources have given rise to particular industries, how the climate has influenced the life and work of the people. Facts are needed and must be learnt; but a fact is remembered with greater ease if it is understood and facts are of use only if we connect them with causes and results.

In giving facts to the class something more than a bare recital is needed. No subjects make greater demand on the descriptive powers of the teacher. He should endeavour to carry the pupils in imagination to the country he is describing; to do this he should, as far as possible, supplement vivid description by pictures, photographs, picture post-cards and, if suitable arrangements can be made, lantern slides.

*Sketch maps by pupils.*—The pupils' note-books should contain a series of sketch maps for each country, each map illustrating a particular feature. Thus one map should contain the mountain system, a second map the river system, a third the distribution of rainfall, and so on. Almost every topic discussed can be illustrated by a sketch map and benefits thereby. In order to draw these sketch maps it is not necessary for pupils to learn to draw the outline by heart, except perhaps in the case of India, whose outline is easily remembered. The teacher should supply blank outline maps (cyclostyled or printed), and these should be used to illustrate various topics. Many maps, each illustrating a single feature, are preferable to one elaborate map crowded with details.

*Blackboard maps by the teacher.*—These should be built up as the lesson proceeds; each map should contain the elements essential to the lesson and no others. Coloured chalks are a valuable help; they make the various features stand out clearly from one another, and if the same colour be used consistently to represent the same features, e.g., red for high land, blue for rivers, yellow for towns, etc., much time will be

gained. Outline maps drawn on blackboard cloth are convenient as the basis for these maps; they may be procured from Messrs. G. Philip and Sons, through Messrs. Longmans, Green & Co., Bombay.

## SYLLABUS OF THE COURSES IN GEOGRAPHY.

### UPPER PRIMARY SECTION.

#### CLASS III.

*General Geography.*—Measurement of distances: direction, North, South, East, West, North-East, North-West, South-East, South-West, drawing of North and South line in play-ground by means of a shadow cast by vertical stick; meaning of scale; plan of class-room, plan of school and play-ground; explanation of the map of the district; the meaning of a map to be explained as far as possible by excursions in the neighbourhood.

#### CLASS IV.

*General Geography.*—Revision of the work of Class III.

*India.*—Further explanation of the meaning of a map, by reference to a comparison of the map of India with a relief model of India as regards the following points:—The Himalayas, the Deccan plateau, the Eastern and Western Ghats, the coast strips and the towns, Calcutta, Madras, Bombay, Delhi, Allahabad, Lucknow, and Cawnpore.

Description of Northern India with reference to the nature of the country and the climate.

The following maps to be drawn by the pupils:—

- (1) Map of India, showing the Himalayas, the Sulaiman Mountains, the Vindhya, the Indus with the five rivers of the Punjab, the Ganges with its main tributaries, the position of the United Provinces.
- (2) Map of the United Provinces showing divisions and their headquarters.

*The World.*—Shape of the Earth, its rotation, light and darkness, the poles and equator, land and water, the names and relative position on the globe of continents and oceans.

Where arrangements can be made oral lessons should be given describing typical scenery of life of man in various parts of the world. They should be illustrated by pictures, lantern slides, etc.

In preparing these lessons the teachers should consult the following books:—World Pictures, by J. B. Reynolds (Black), (3s. 6d.); Man in Many Lands, by Lyde (Black) (6d.); and the Peeps at Many Lands Series (Black) (3s. each).

*Physical Geography.*—Explanation of the following terms by reference to the globe and map :—Continent, ocean, gulf, bay, lake, strait, cape, peninsula, isthmus, mountain, island. Description of the sea.

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### TEXT-BOOKS.

#### Geography.

*Class IV.*—Anglo-Vernacular School Geography, \* Book I, Part I (Urdu or Hindi), published by Longmans, Green & Co. (Urdu, 10 annas; Hindi, 8 annas); or Anglo-Vernacular School Geography, Part I. (Urdu or Hindi), by Madan Lal Jain, published by Macmillan and Co., Ltd., Calcutta, (Urdu, 6 annas; Hindi, 5 annas); or *Jughraphia-i-Jadid*, Part I, or Navin Bhogal, Pratham Pustak, by Munshi Lal Agarwala, published by Macmillan and Co. Ltd., Calcutta, (Urdu, 12 annas; Hindi, 10 annas.)

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### SYLLABUS OF THE COURSES IN VERNACULAR (URDU OR HINDI).

#### PREPARATORY SECTION.

##### INFANT CLASS A.

*Reading.*—To read correctly words and easy sentences from a primer.

*Writing.*—To copy characters and easy words from a primer. Special *takhtis* with letters and figures in indelible ink are recommended for use.

##### INFANT CLASS B.

*Reading.*—To read sentences at sight from the text-book in one form of the vernacular and to know the meaning of words.

*Writing.*—To copy sentences from the text-books in Urdu or Nagri character. Special *takhtis* with letters and figures in indelible ink are recommended for use.

#### LOWER PRIMARY SECTION.

##### CLASS I.

*Reading.*—To read accurately at sight from the text-book in one form of the vernacular, and to explain the meaning of words and sentences.

*Writing.*—To copy and to write sentences to dictation from the text-book. Special *takhtis* with letters and figures in indelible ink are recommended for use. Copy-books to be shown.

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\*The Anglo-Vernacular School Geography, Book I, Parts I to III (Urdu or Hindi) is also available in one volume (Urdu, Rs. 2-4-0; Hindi, Re. 1-4-0.)

CLASS II.

*Reading.*—To read accurately at sight from the text-book in one form of the vernacular and to explain the meaning of words, sentences and paragraphs; to turn verse into prose.

*Writing.*—To write sentences to dictation from the text-book in Urdu or Nagri character. Copy-books to be shown.

UPPER PRIMARY SECTION.

CLASS III.

*Reading.*—To read accurately at sight from the text-book in one form of the vernacular and to explain the meaning of words, sentences and paragraphs; to turn verse into prose order.

*Writing.*—To write passages to dictation from the text-book. Copy-books to be shown.

*Grammar.*—To know the parts of speech.

CLASS IV.

*Reading.*—To read at sight from the text-book in one form of the vernacular and to explain words, allusions and sentences.

*Writing.*—To write passages to dictation from a book of equal difficulty with the text-book, or an original letter on some ordinary topic in Urdu or Nagri character. Copy-books to be shown.

*Grammar.*—Etymology.

TEXT-BOOKS.

PRIMERS AND READERS.

INFANT CLASS A.

*Urdu.*—Bachchon-ka-Bagh—Pahli Kiari (Revised), published by the Newal Kishore Press, Lucknow. (Coloured 1 anna 6 pies; uncoloured 1 anna.)

or

Shanti Press Reader for Infant class A, by Rai Sahib Raghunath Das and Muhammad Rafi, published by Rai Sahib Lala Ram Dayal Agarwala, Katra, Allahabad. (1 anna 9 pies.)

or

Asan Urdu Primer, Part I, by Daya Shankar Dube and Saiyid Zamin Ali, published by the Indian Press, Ltd., Allahabad. (1 anna 6 pies.)

or

Gulab Reader Series, Infant Reader, Part I, by Abdul Wahid, published by Rai Sahib M. Gulab Singh & Sons, Lahore. (1 anna 5 pies.)

or

Bachchon ki Pahli Kitab, by Khan Bahadur Idris Ahmad and Adhyapak Ram Ratan, published by the Hindustani Book Dépôt, Lucknow. (Finish paper—2 annas 6 pies; Pictures on art paper—3 annas; Cheaper edition, 1 anna 6 pies.)

or

Silsila-i-Nisab Hindustani ka Asan Qaida, by Khwaja Hamid Ullah Mehr, revised by Mir Mehdi Hasan, published by Mufeez and Sons, Muslim University Press, Aligarh. (1 anna 6 pies.)

or

Urdu ki Pahli Sirhi, by Dr. Ram Prasad Tripathi, and Saiyid Manzur Husain Musavi, published by the Onkar Press, Allahabad. (1 anna.)

*Hindi* :—Bal Batika—Pahli Kiari, revised edition, published by the Newal Kishore Press, Lucknow. (Coloured, 1 anna 6 pies; uncoloured, 1 anna.)

or

Bal Bodh Primer I, edited by Daya Shankar Dube, published by the Indian Press, Ltd., Allahabad. (1 anna 6 pies.)

or

Pahli Bal Pothi, by Sahitya Ratna Ayodhya Singh Upadhyaya and Adhyapak Ram Ratan, published by the Hindustani Book Dépôt, Lucknow. (Finish paper—2 annas 6 pies; Pictures on art paper—3 annas; Cheaper edition, 1 anna 6 pies.)

or

Bal Shiksha Primer, by Krishna Kant Malviya, published by Sri Raj Narain Suri, Chowk Ganga Das, Allahabad. (1 anna 6 pies.)

or

Hindi ki Pahli Sirhi, by Dr. Ram Prasad Tripathi, published by the Onkar Press, Allahabad. (1 anna.)

or

Bachchon ki Primer, Part I, by Sudarshan Acharya and Shiva Prasad Srivastava, published by Shishu Press, Allahabad. (2 annas.)

#### INFANT CLASS B.

*Urdu* :—Bachchon ka Bagh—Dusri Kiari (revised), published by the Newal Kishore Press, Lucknow. (Coloured, 2 annas 6 pies; uncoloured, 2 annas.)

or

Shanti Press Reader for Infant class B, by Rai Sahib Raghunath Das and Muhammad Rafi, published by Rai Sahib Lala Ram Dava Agarwala, Katra, Allahabad. (1 anna 9 pies.)

or

Asan Urdu Primer, Part II, by Daya Shankar Dube and Saiyid Zamin Ali, published by the Indian Press, Ltd., Allahabad. (1 anna 6 pies.)

or

Gulab Reader Series, Infant Reader, Part II, by Abdul Wahid, published by Rai Sahib M. Gulab Singh & Sons, Lahore. (1 anna 5 pies.)

or

Bachchon ki Dusri Kitab, by Khan Bahadur Idris Ahmad and Adhyapak Ram Ratan, published by the Hindustani Book Dépôt, Lucknow. (Superior edition, 2 annas; Cheaper edition, 1 anna 6 pies.)

or

Silsila-i-Nisab Hindustani ki Asan Kitab, by Khwaja Hamid Ullah Mehr, revised by Mir Mehdi Hasan, published by Mufeez & Sons, Muslim University Press, Aligarh. (1 anna 6 pies.)

or

Urdu ki Dusri Sirhi, by Dr. Ram Prasad Tripathi and Saiyid Manzur Husain Musavi, published by the Onkar Press, Allahabad. (2 annas.)

Hindi :—Bal Batika—Dusri Kiari, revised edition, published by the Newal Kishore Press, Lucknow. (Coloured, 2 annas 6 pies; uncoloured, 2 annas.)

or

Bal Bodh Primer II, edited by Daya Shankar Dube, published by the Indian Press, Ltd., Allahabad. (1 anna 6 pies.)

or

Dusri Bal Pothi, by Sahitya Ratna Ayodhya Singh Upadhyaya and Adhyapak Ram Ratan, published by the Hindustani Book Dépôt, Lucknow. (Superior edition, 2 annas 9 pies; Cheaper edition, 1 anna 6 pies.)

or

Bal Shiksha, Part I, by Krishna Kant Malviya and Asghar Husain "Asghar", published by Sri Raj Narain Suri, Chowk Ganga Das, Allahabad. (1 anna 6 pies.)

or

Hindi ki Dusri Sirhi, by Dr. Ram Prasad Tripathi, published by the Onkar Press, Allahabad. (2 annas.)

or

*Bachchon ki Primer, Part II*, by Sudarshan Acharya and Shiva Prasad Srivastava, published by the Shishu Press, Allahabad. (2 annas.)

CLASS I.

*Urdu* :—*Hindustani Zaban ki Pahli Kitab*, by Khan Bahadur Idris Ahmad and Adhyapak Ram Ratan, published by Hindustani Book Dépôt, Lucknow. (Pattern I—Coloured plates, 4 annas; Pattern II—Cheaper edition, 3 annas 6 pies.)

or

*Asan Urdu Reader, Part I*, by Saiyid Zamin Ali, and Daya Shankar Dube, published by the Indian Press, Ltd., Allahabad. (3 annas 6 pies.)

or

*Hindi Press Series—Pahli Kitab*, edited by Ramji Lal Sharma and Sri Ram Bajpai, published by the Hindi Press, Allahabad. (3 annas 6 pies.)

or

*Shanti Press Reader, Part I*, by Rai Sahib Raghu Nath Das and Muhammad Rafi, published by Rai Sahib Lala Ram Dayal Agarwala, Allahabad. (3 annas 6 pies.)

or

*Onkar Reader, Book I*, by Saiyid Manzoor Husain, and Dr. Ram Prasad Tripathi, published by the Onkar Press, Allahabad. (3 annas.)

or

*Gulab Reader, Part I*, by Abdul Wahid, published by Rai Sahib Munshi Gulab Singh & Sons, Lahore. (5 annas.)

or

*Newal Kishore Press Reader I*, by Prem Chand and Mohammad Askari, published by the Newal Kishore Press, Lucknow. (3 annas.)

*Hindi* :—*Hindustani ki Pahli Poethi*, by Ajodhya Singh Upadhyaya and Adhyapak Ram Ratan, published by Hindustani Book Dépôt, Lucknow. (Pattern I—Coloured plates, 4 annas; Pattern II—Cheaper edition, 3 annas 6 pies.)

or

*Bal Bodh Reader, Part I*, edited by Daya Shankar Dube, published by the Indian Press, Ltd., Allahabad. (3 annas 6 pies.)

or

*Hindi Press Series—Pahli Kitab*, edited by Ramji Lal Sharma and Sri Ram Bajpai, published by the Hindi Press, Allahabad. (3 annas 6 pies.)

or

Shanti Press Reader, Part I, by Rai Sahib Raghu Nath Das, published by Rai Sahib Lala Ram Dayal Agarwala, Allahabad. (3 annas and 9 pies.)

or

Onkar Reader, Book I, by Dr. Ram Prasad Tripathi, published by the Onkar Press, Allahabad. (3 annas.)

or

Gulab Reader, Part I, by Abdul Wahid, published by Rai Sahib Munshi Gulab Singh & Sons, Lahore. (5 annas 4 pies.)

or

Newal Kishore Press Reader I, by Prem Chand and Mohammad Askari, published by the Newal Kishore Press, Lucknow. (3 annas.)

CLASS II.

Urdu :—Hindustani Zaban ki Dusri Kitab, by Khan Bahadur Idris Ahmad and Adhyapak Ram Ratan, published by Hindustani Book Dépôt, Lucknow. (Pattern I—Coloured plates, 6 annas 6 pies; Pattern II—Cheaper edition, 4 annas 9 pies.)

or

Asan Urdu Reader, Part II, by Saiyid Zamin Ali and Daya Shankar Dube, published by the Indian Press, Ltd., Allahabad. (4 annas 6 pies.)

or

Hindi Press Series—Dusri Kitab, edited by Ramji Lal Sharma and Sri Ram Bajpai, published by the Hindi Press, Allahabad. (4 annas 6 pies.)

or

Shanti Press Reader, Part II, by Rai Sahib Raghu Nath Das and Muhammad Rafi, published by Rai Sahib Lala Ram Dayal Agarwala, Allahabad. (5 annas 3 pies.)

or

Onkar Reader, Book II, by Saiyid Manzur Husain and Dr. Ram Prasad Tripathi, published by the Onkar Press, Allahabad. (4 annas.)

or

Gulab Reader, Part II, by Abdul Wahid, published by Rai Sahib Munshi Gulab Singh & Sons, Lahore. (5 annas 2 pies.)

or

Newal Kishore Press Reader II, by Prem Chand and Mohammad Askari, published by the Newal Kishore Press, Lucknow. (4 annas 6 pies.)

Hindi :—Hindustani ki Dusri Pothi, by Ajodhya Singh Upadhya and Adhyapak Ram Ratan, published by Hindustani Book Dépôt, Lucknow. (Pattern I—Coloured plates, 6 annas 6 pies; Pattern II—Cheaper edition, 4 annas 9 pies.)

or

Bal Bodh Reader, Part II, edited by Daya Shankar Dube, published by the Indian Press, Ltd., Allahabad. (4 annas 6 pies.)

or

Hindi Press Series—Dusri Kitab, edited by Ramji Lal Sharma and Sri Ram Bajpai, published by the Hindi Press, Allahabad. (4 annas 6 pies.)

or

Shanti Press Reader, Part II, by Rai Sahib Raghu Nath Das, published by Rai Sahib Lala Ram Dayal Agarwala, Allahabad. (5 annas 3 pies.)

or

Onkar Reader, Book II, by Dr. Ram Prasad Tripathi, published by the Onkar Press, Allahabad. (4 annas.)

or

Gulab Reader, Part II, by Abdul Wahid, published by Rai Sahib Munshi Gulab Singh & Sons, Lahore. (5 annas 9 pies.)

or

Newal Kishore Press Reader II, by Prem Chand and Mohammad Askari, published by the Newal Kishore Press, Lucknow. (5 annas.)

## CLASS III.

*Common language reader.*

\*Urdu

*Literary reader.*

Hindustani Zaban ki Tisri Kitab, by Khan Bahadur Idris Ahmad and Adhyapak Ram Ratan, published by Hindustani Book Dépôt, Lucknow. (Pattern I—Coloured plates, 7 annas 9 pies; Pattern II—Cheaper edition, 6 annas 3 pies.)

or

Asan Urdu Reader, Part III, by Saiyid Zamin Ali, and Daya Shankar Dube, published by the Indian Press, Ltd., Allahabad. (6 annas.)

or

Hindi Press Series, Tisri Kitab, edited by Ramji Lal Sharma and Sri Ram Bajpai, published by the Hindi Press, Allahabad. (5 annas 3 pies.)

and

Sawad-i-Urdu, by Khan Sahib Muhammad Ismail, published by the Newal Kishore Press, Lucknow. (4 annas 3 pies.)

or

Ghuncha-i-Adab, 1930 edition, by Naimur-Rahman, published by the Indian Press, Ltd., Allahabad. (6 annas.)

or

Macmillan's New Urdu Literary Reader for classes III and IV, by M. Saiyid Ishaq Ali, published by Macmillan & Co. (5 annas.)

\* The literary readers prescribed for use in classes III and IV should not be commenced until the scholar has made sufficient progress in the common language to enable him to study the literary reader with advantage.

## CLASS III.

*Common language reader.*

\* Urdu

*Literary reader.**or*

Shanti Press Reader,  
Part III, by Rai Sahib Raghu  
Nath Das and Muhammad  
Rafi, published by Rai Sahib  
Lala Ram Dayal Agarwala,  
Allahabad. (7 annas.)

*or*

Onkar Reader, Book III,  
by Saiyid Manzoor Husain  
and Dr. Ram Prasad Tripathi,  
published by the Onkar Press,  
Allahabad. (5 annas.)

*or*

Gulab Reader, Part III, by  
Abdul Wahid, published by  
Rai Sahib Munshi Gulab Singh  
& Sons, Lahore. (6 annas 2  
pies.)

*or*

Newal Kishore Press Reader  
III, by Prem Chand and  
Mohammad Askari, published  
by the Newal Kishore Press,  
Lucknow. (7 annas.)

and

Chaman-i-Urdu, compiled  
by Saiyid Zafar Husain, pub-  
lished by Lala Ram Narain  
Lal, Katra, Allahabad.  
(6 annas.)

*or*

Tanwir-i-Urdu for classes  
III and IV of Vernacular and  
Anglo-Vernacular Schools, by  
Maulvi M. G. Zubaid Ahmad,  
published by Indian Publish-  
ing House, Allahabad, 1927  
edition. (4 annas.)

*or*

Shigoofa-i-Adab, for classes  
III and IV of Vernacular and  
Anglo-Vernacular Schools, by  
Hamid Ullah Afsar, published  
by the Indian Press, Ltd.,  
Allahabad, 1927 edition. (6  
annas.)

*or*

Gauhar-i-Urdu, by Abid  
Hasan Faridi, published by  
the University Publishing  
House, Agra. (5 annas.)

*or*

Sitar-i-Urdu (revised), by  
Iftikhar Husain Zuberi, revised  
by Itrat Husain Zuberi, pub-  
lished by Kedar Nath and Sons,  
Meerut. (5 annas.)

*or*

Bahar-i-Adab, by Muham-  
mad Husain Khan, published  
by G. R. Bhargava and Sons,  
Chandausi. (5 annas.)

\* The literary readers prescribed for use in classes III and IV should not be commenced until the scholar has made sufficient progress in the common language to enable him to study the literary reader with advantage

## CLASS III.

*Common language reader.*

Hindustani ki Tisri Pothi, by Ajodhya Singh Upadhya and Adhyapak Ram Ratan, published by Hindustani Book Dépôt, Lucknow. (Pattern I—Coloured plates, 7 annas 9 pies; Pattern II—Cheaper edition, 6 annas 3 pies.)

or

Bal Bodh Reader, Part III, edited by Daya Shankar Dube, published by the Indian Press, Ltd., Allahabad. (6 annas.)

or

Hindi Press Series, Tisri Kitab, edited by Ramji Lal Sharma and Sri Ram Bajpai, published by the Hindi Press, Allahabad. (5 annas 3 pies.)

or

Shanti Press Reader, Part III, by Rai Sahib Raghu Nath Das, published by Rai Sahib Lala Ram Dayal Agarwala, Allahabad. (6 annas 9 pies.)

or

Onkar Reader, Book III, by Dr. Ram Prasad Tripathi, published by the Onkar Press, Allahabad. (5 annas.)

or

Gulab Reader, Part III, by Abdul Wahid, published by Rai Sahib Munshi Gulab Singh & Sons, Lahore. (6 annas 4 pies.)

## \*Hindi

*Literary reader.*

Hindi Praveshika, published by P. C. Dwadash Shreni & Co., Booksellers, Publishers, etc., Aligarh. (4 annas.)

or

Hindi Shiksha, Part I, edited by Padma Singh Sharma, published by the Hindi Press, Allahabad. (6 annas.)

or

Bhasha Pravesha, Part I, revised 1930 edition, by Rai Sahib Sukhdeo Tewari, published by the Indian Press, Ltd., Allahabad. (6 annas.)

or

Sahitya Manjari, 1930 edition, edited by Rama Shankar Shukla "Rasal," published by Lala Ram Narayan Lal, Katra, Allahabad. (6 annas.)

or

Sahitya Shiksha, Part I, by Professor Daya Shankar Dube, and Ganga Narain Dwivedi, published by Shri Raj Narain Suri, Chowk Ganga Das, Allahabad. (6 annas.)

or

Nutan Hindi Pathawali, Part I, 1930 edition, by Jaidev Singh, Krishna Vinayak Phadke and Lakshmi Kant Tripathi, published by City Book House, Cawnpore. (8 annas.)

or

Sahitya Prasoon, Part I, by Mahendra, published by the University Book Dépôt, Agra. (5 annas.)

and

\* The literary readers prescribed for use in classes III and IV should not be commenced until the scholar has made sufficient progress in the common language to enable him to study the literary reader with advantage.

## CLASS III.

*Common language reader.**or*

Newal Kishore Press Reader III, by Prem Chand and Mohammad Askari, published by the Newal Kishore Press, Lucknow. (7 annas.)

\*Hindi

and

*Literary reader.**or*

Sahitya Pravesh (revised edition of Sahitya Manjari), by Adhyapak Ram Ratan and Chandra Hans Sharma, Visharad, published by the Ratanashram, Agra. (5 annas.)

## CLASS IV.

\*Urdu

Hindustani Zaban ki Chauthi Kitab, by Khan Bahadur Idris Ahmad and Adhyapak Ram Ratan, published by Hindustani Book Dépôt, Lucknow. (Pattern I—Coloured plates, 8 annas 6 pies; Pattern II—Cheaper edition, 6 annas 3 pies.)

*or*

Asan Urdu Reader, Part IV, by Saiyid Zamin Ali and Daya Shankar Dube, published by the Indian Press, Ltd., Allahabad. (6 annas.)

*or*

Hindi Press Series, Chauthi Kitab, edited by Ramji Lal Sharma and Sri Ram Bajpai, published by the Hindi Press, Allahabad. (5 annas 3 pies.)

*or*

Shanti Press Reader, Part IV, by Rai Sahib Raghu Nath Das and Muhammad Rafi, published by Rai Sahib Lala Ram Dayal Agarwala, Allahabad. (7 annas.)

*or*

Onkar Reader, Book IV, by Saiyid Manzoor Husain, and Dr. Ram Prasad Tripathi, published by the Onkar Press, Allahabad. (5 annas.)

and

Sawad-i-Urdu, by Khan Sahib Muhammad Ismail, published by the Newal Kishore Press, Lucknow. (4 annas 3 pies.)

*or*

Ghuncha-i-Adab, 1930 edition, by Naimur Rahman, published by the Indian Press, Ltd., Allahabad. (6 annas.)

*or*

Macmillan's New Urdu Literary Reader for classes III and IV, by M. Saiyid Ishaq Ali, published by Macmillan & Co. (5 annas.)

*or*

Chaman-i-Urdu, by Saiyid Zafar Husain, published by Lala Ram Narain Lal, Katra, Allahabad. (6 annas.)

*or*

Tanwir-i-Urdu, for classes III and IV of Vernacular and Anglo-Vernacular Schools, by Maulvi M. G. Zubaid Ahmad, published by Indian publishing House, Allahabad, 1927 edition. (4 annas.)

\* The literary readers prescribed for use in classes III and IV should not be commenced until the scholar has made sufficient progress in the common language to enable him to study the literary reader with advantage.

## CLASS IV.

*Common language reader.**\*Urdu**Literary reader.**or*

Gulab Reader, Part IV, by Abdul Wahid, published by Rai Sahib Munshi Gulab Singh & Sons, Lahore. (7 annas.)

*or*

Newal Kishore Press Reader IV, by Prem Chand and Mohammad Askari, published by the Newal Kishore Press, Lucknow. (7 annas.)

and

*or*

Gauhar-i-Urdu, by Abid Hasan Faridi, published by the University Publishing House, Agra. (5 annas.)

*or*

Sitar-i-Urdu (revised), by Iftikhar Husain Zuberi, revised by Itrat Husain Zuberi, published by Kedar Nath and Sons, Meerut. (5 annas.)

*or*

Bahar-i-Adab, by Muhammad Husain Khan, published by G. R. Bhargava and Sons, Chandausi. (5 annas.)

Hindustani ki Chauthi Pothi, by Ajodhya Singh Upadhya and Adhyapak Ram Ratan, published by Hindustani Book Dépôt, Lucknow. (Pattern I—Coloured plates, 8 annas 6 pies; Pattern II—cheaper edition, 6 annas 3 pies.)

*\*Hindi*

and

Hindi Praveshika, published by P. C. Dwadash Shreni & Co., Booksellers, Publishers, etc., Aligarh. (4 annas.)

*or*

Hindi Shiksha, Part I, edited by Padma Singh Sharma, published by the Hindi Press, Allahabad. (6 annas.)

\* The literary readers prescribed for use in classes III and IV should not be commenced until the scholar has made sufficient progress in the common language to enable him to study the literary reader with advantage.

## CLASS IV.

*Common language reader.**or*

Bal Bodh Reader, Part IV,  
edited by Daya Shankar Dube,  
published by the Indian Press,  
Ltd., Allahabad. (6 annas.)

*or*

Hindi Press Series, Chauthi  
Kitab, edited by Ramji Lal  
Sharma and Sri Ram Bajpai,  
published by the Hindi Press,  
Allahabad. (5 annas 3 pies.)

*or*

Shanti Press Reader, Part IV,  
by Rai Sahib Raghu Nath Das,  
published by Rai Sahib Lala  
Ram Dayal Agarwala, Allah-  
abad. (7 annas.)

*or*

Onkar Reader, Book IV,  
by Dr. Ram Prasad Tripathi,  
published by the Onkar Press,  
Allahabad. (5 annas.)

*or*

Gulab Reader, Part IV,  
by Abdul Wahid, published by  
Rai Sahib Munshi Gulab Singh  
& Sons, Lahore. (6 annas and  
1 pie.)

*\*Hindi**and**Literary reader.**or*

Bhasha Pravesha, Part I, re-  
vised 1930 edition, by Rai Sa-  
hib Sukhdeo Tewari, published  
by the Indian Press, Limited,  
Allahabad. (6 annas.)

*or*

Sahitya Manjari, 1930 edi-  
tion, edited by Rama Shankar  
Shukla "Rasal," published by  
Lala Ram Narain Lal, Katra,  
Allahabad. (6 annas.)

*or*

Sahitya Shiksha, Part I,  
by Professor Daya Shankar  
Dube and Ganga Narain Dwi-  
vedi, published by Shri Raj  
Narain Suri, Chowk Ganga  
Das, Allahabad. (6 annas.)

\*The literary readers prescribed for use in classes III and IV should not be commenced until the scholar has made sufficient progress in the common language to enable him to study the literary reader with advantage.

## CLASS IV.

*Common language reader.*

or  
 Newal Kishore Press Reader  
 IV, by Prem Chand and  
 Mohammad Askari, published  
 by the Newal Kishore Press,  
 Lucknow. (7 annas.)

\*Hindi

and

*Literary reader.*

or

Nutan Hindi Pathawali,  
 Part I, 1930 edition, by Jaidev  
 Singh, Krishna Vinayak Phad-  
 ke, and Lakshmi Kant Tri-  
 pathi, published by City Book  
 House, Cawnpore. (8 annas.)

or

Sahitya Prasoon, Part I, by  
 Mahendra, published by the  
 University Book Dépôt, Agra.  
 (5 annas.)

or

Sahitya Pravesh (revised edi-  
 tion of Sahitya Manjari), by  
 Adhyapak Ram Ratan and  
 Chandra Hans Sharma, Visha-  
 rad, published by the Ratana-  
 shram, Agra. (5 annas.)

## PATRIOTIC POEMS.

The following books containing patriotic poems are recommended  
 for class use in schools :—

## CLASSES I—IV.

*Hindi.*—Swadesh Gan, Parts I and II (on cream wove) for classes I and II and III and IV respectively, published by the Bhargava School Book Dépôt, Lucknow (6 pies each); or Swadesh Gan, Parts I and II (on white printing) for classes I and II and III and IV respectively, published by the Bhargava School Book Dépôt, Lucknow (5 pies each); or Bharat Gan, Parts I and II (coloured cover without illustrations) for classes I and II and III and IV respectively, published by the Standard Press, Allahabad (9 pies each); or Swadesh Sangit, Parts I and II (with cover on art paper with notes and illustrations) for classes I and II and III and IV respectively, published by the Indian Press, Allahabad (Part I, one anna 3 pies, Part II, 1 anna 6 pies); or Swadesh Sangit, Parts I and II (with 60 lb. cover and without illustration and notes) for classes I and II and III and IV respectively, published by the Indian Press, Allahabad (9 pies each); or Swadesh Prem, Parts I and II (illustrated) for classes I and II and III and IV respectively, published by Ram Dayal Agarwala, Allahabad (9 pies each); or Swadesh Prem, Parts I and II (unillustrated) for classes I and II and III and IV respectively, published by Ram Dayal Agarwala, Allahabad (6 pies each); or Hindustani Bachchon ke Gane, Parts I and II (with illustrations on ivory finish

\*The literary readers prescribed for use in classes III and IV should not be commenced until the scholar has made sufficient progress in the common language to enable him to study the literary reader with advantage.

paper and cover in one colour) for classes I and II and III and IV respectively, published by the Hindustani Book Dépôt, Lucknow (Part I—9 pies, Part II—1 anna); or Hindustani Bachchon ke Gane, Parts I and II (with illustrations on art paper and coloured border on each page and two-coloured title) for classes I and II and III and IV respectively, published by the Hindustani Book Dépôt, Lucknow (Part I—one anna, Part II—1 anna 3 pies); or Desh ke Git, Parts I and II for classes I and II and III and IV respectively, published by the Shishu Press, Allahabad (Parts I and II—6 pies each); or Swadeshi Gan, Parts I and II for classes I and II and III and IV respectively, published by the Saraswati Publishing House, Agra (Part I—9 pies, Part II—one anna); or Swadesh Gitawali, Parts I and II for classes I and II and III and IV respectively, published by the Newal Kishore Press, Lucknow (Part I—9 pies, Part II—1 anna); or Hindustani Git, Parts I and II for classes I and II and III and IV respectively, published by the School Book and Apparatus Dépôt, Lucknow (Part I—6 pies, Part II—9 pies); or Patriotic Poems in Hindi, Parts I and II for classes I and II and III and IV respectively, published by P. C. Dwadesh Shreni and Co., Aligarh (Part I—3 pies, Part II—4 pies); or Desh Bandana, Parts I and II for classes I and II and III and IV respectively, published by Agarwal Brothers and Co., Allahabad. (Parts I and II—4½ pies each); or Rashtri Gan, Parts I and II (cheap edition) for classes I and II and III and IV respectively, published by Gautama Brothers and Co., Cawnpore (Part I—6 pies, Part II—9 pies); or Rashtri Gan, Parts I and II (picture edition) for classes I and II and III and IV respectively, published by Gautama Brothers and Co., Cawnpore (Part I—9 pies, Part II—one anna).

*Urdu.*—Watan ki-Yad, Parts I and II for classes I and II and III and IV respectively, published by the Newal Kishore Press, Lucknow (Part I—9 pies, Part II—1 anna); or Patriotic Poems, Parts I and II for classes I and II and III and IV respectively, published by Lala Ram Narain Lal, Allahabad (Part I—6 pies, Part II—9 pies); or Watan ke Rag, Parts I and II (illustrated) for classes I and II and III and IV respectively, published by the Indian Press, Allahabad (Part I—1 anna 3 pies, Part II—1 anna 6 pies); or Watan ke Rag, Parts I and II (unillustrated) for classes I and II and III and IV respectively, published by the Indian Press, Allahabad (Parts I and II—9 pies each); or Watan ke Git, Parts I and II for classes I and II and III and IV respectively, published by the Saraswati Publishing House, Agra (Parts I and II—9 pies each); or Tarana-i- Watan, Parts I and II (coloured cover without illustrations) for classes I and II and III and IV respectively, published by the Standard Press, Allahabad (Part I—6 pies, Part II—9 pies); or Patriotic Poems in Urdu, Parts I and II for classes I and II and III and IV respectively, published by P. C. Dwadesh Shreni and Co., Aligarh (Part I—4 pies, Part II—5 pies); or Hubb-i- Watan in Urdu, Parts I and II (illustrated) for classes I and II and III and IV respectively, published by Ram Dayal Agarwala, Allahabad, (9 pies each); or Hubb-i-Watan in Urdu, Parts I

and II (unillustrated) for classes I and II and III and IV respectively, published by Ram Dayal Agarwala, Allahabad (6 pies each), or Watan ke Git, Parts I and II for classes I and II and III and IV respectively, published by the Shishu Press, Allahabad (Parts I and II—6 pies each); or Sarod-i-Watan, Parts I and II (cheap edition) for classes I and II and III and IV respectively, published by Gautama Brothers and Co., Cawnpore (Part I—6 pies, Part II—9 pies); or Sarod-i-Watan, Parts I and II (picture edition) for classes I and II and III and IV respectively, published by Gautama Brothers and Co., Cawnpore (Part I—9 pies, Part II—1 anna); or Watan ka Tarana, Parts I and II for classes I and II and III and IV respectively, published by the Bhargava Book Agency, Allahabad (Parts I and II—6 pies each).

#### COPY-BOOKS.

*Urdu.*—Urdu Khushkhati ka Naya Silsilā (Urdu Copy-books, nos. I to IV, 1918), published by Gulab Singh & Sons, Lahore (price Re. 0-1-7, 0-1-7, 0-2-3 and 0-2-3); or Urdu copy mashq, nos. 1—4, by M. H. S. Jalal-ud-din Ahmad Jafri (Anwar Ahmadi Press, Allahabad) (price Re. 0-2-0, 0-1-6, 0-1-3 and 0-1-3); or Urdu Model Copy-slips nos. I—III, published by the School Book and Apparatus Dépôt, 406, Fatehganj, Lucknow, 2nd edition (price Re. 0-1-0, 0-1-0 and 0-1-3); or Urdu Copy-slips, Parts 1 to 3, published by Lala Ram Narayan Lal, Bookseller and Publisher, Katra, Allahabad (1 anna each); or Newal Kishore Urdu Copy-book, nos. 1—4 (revised, improved and enlarged edition), published by the Newal Kishore Press, Lucknow (1 anna 9 pies each); or Urdu Khushkhati ka Naya Silsilā, nos. 1—4, published by the Oriental Publishing House, Lucknow (price nos. 1 and 2—1 anna 9 pies each and nos. 3 and 4—2 annas 3 pies each); or \*Copy slip no. 3 (in Urdu), published by the Indian Press, Ltd., Allahabad (1 anna 3 pies); or Muallim Khush Navisi, slip nos. 3, 4, 4A, 5 and 5A, by Sita Ram and Abul Hasan Haidri, published by Bhargava Book Agency, Johnstonganj, Allahabad, (price no. 3, 1 anna and nos. 4, 4A, 5 and 5A, 9 pies each.) [Slip no. 3 for class I, slip nos. 4 and 4A for class II and slip nos. 5 and 5A for class III.]

\*For use in class III only.

*Hindi.*—Hindi Copy-books, nos. I to IV, published by the Indian Press, Allahabad (2 annas 6 pies each), or Hindi Model Copy-slips nos. I—III, published by the School Book and Apparatus Dépôt, 406, Fatehganj, Lucknow, 1925 edition (price Re. 0-1-0, 0-1-0, 0-1-3); or Model Copy-slip

no. 1(A), in Hindi, for Class I, published by the School Book and Apparatus Dépôt, 406, Fatehganj, Lucknow, 1925 edition (1 anna); or Lipibodh Hindi Copy slip nos. 1 to 3, by C. L. Malviya, 1st edition, published by Bhargava School Book Dépôt, 15-16, Aminabad Park, Lucknow (1 anna 3 pies each).

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### Drawing and Brushwork.

#### AIMS AND METHOD IN TEACHING DRAWING.

*Method.*—Teachers of drawing should bear in mind that it is far more important to train the eye and develop the suppleness of the hand than to produce mechanically accurate copies of drawings. They should therefore see that pencils of suitable length are used and kept properly pointed. They should forbid the shifting and turning of the paper in the process of drawing and insist on the adaptation of the hand to the lines required. They must accept responsibility for seeing that scholars do a satisfactory amount of work, and while on the one hand hasty and untidy work is to be checked, on the other hand anything of a laboriously minute and mechanical nature is to be avoided.

In free-hand drawing no mechanical aids should be allowed.

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#### SYLLABUS OF THE COURSES IN DRAWING.

##### PREPARATORY SECTION.

###### INFANT CLASS A.

Drawing of straight lines, squares and oblongs.

###### INFANT CLASS B.

Drawing of curved lines, circles, and figures like circles, bounded by curved lines (on slate). Drawing to be taught on the blackboard; no books to be prescribed.

##### LOWER PRIMARY AND UPPER PRIMARY SECTION.

As in the drawing books prescribed.

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#### TEXT-BOOKS.

##### CLASS I.

As in Macmillan's Official Drawing Book, no. 1 (6 annas); or as in Nelson's Graduated Drawing Book, no. 1; or as in Indian Drawing Books for Vernacular Schools, Book I (4 annas); or as in Banbery's Scholars' Drawing Book, no. 1, in Urdu or Hindi (6 annas); or as in Indian Drawing Copy-slips for Vernacular Schools, no. 3, published by the School Book and Apparatus Dépôt, Lucknow (2 annas); (slates to be used during the first half-year, then paper).

## CLASS II.

As in Macmillan's Official Drawing Book, no. 2 (6 annas); or as in Nelson's Graduated Drawing Book, no. 2; or as in Indian Drawing Books for Vernacular Schools, Book II (4 annas); or as in Banbery's Scholars' Drawing Book, no. 2, in Urdu or Hindi (6 annas); or as in Indian Drawing Copy-slips for Vernacular Schools, no. 4, published by the School Book and Apparatus Dépôt, Lucknow (2 annas).

## CLASS III.

As in Macmillan's Official Drawing Book, no. 3 (6 annas); or as in Nelson's Graduated Drawing Book, no. 3; or as in Banbery's Scholars' Drawing Book, no. 3 (6 annas); or as in Indian Drawing Book, no. 3, revised edition, published by the Indian Press, Allahabad (4 annas); or as in Modern Drawing Series, Book no. 1, by R. C. Shinghal, revised edition, published by Gupta Bros. & Co., Khurja (6 annas).

## CLASS IV.

As in Macmillan's Official Drawing Book, no. 4 (6 annas); or as in Nelson's Graduated Drawing Book, no. 4; or as in Banbery's Scholars' Drawing Book, no. 4 (6 annas); or as in Indian Drawing Book, no. 4 revised edition, published by the Indian Press, Allahabad (4 annas); or as in Modern Drawing Series, Book no. II, by R. C. Shinghal, revised edition, published by Gupta Bros. & Co., Khurja (6 annas).

*N.B.*—Teachers of limited experience in the teaching of drawing are recommended to use "Longman's Complete Drawing Course. Part I," by I. H. Morris (Longmans, Green & Co.) (6s.) Teachers of drawing in schools where Banbery's Scholars' Drawing Books are used are recommended to use "Teachers' Drawing Manual" in English, Urdu or Hindi, by H. Banbery (Indian Press, Allahabad) (Rs. 2 each).

Book recommended for the use of drawing masters:—

Imaginative Drawing, volume II, by E. A. Branch, published by Evans Bros., London.

## SYLLABUS OF THE COURSES IN BRUSHWORK.

### PREPARATORY SECTION.

#### INFANT CLASS A.

Free-arm drawing on the blackboard or on slates, of straight lines, squares, and oblongs with coloured chalks—the squares and oblongs being filled up with a mass of colour.

#### INFANT CLASS B.

Free-arm drawing as in the Infant class A, and free-arm drawing on the blackboard or on slates, of curved lines, circles and figures like circles, bounded by curved lines with coloured chalks—all figures being filled up with a mass of colour on the same system as the brushwork.

## LOWER PRIMARY SECTION.

### CLASS I.

Some of the elements and their combinations in brushwork which compose simple flowers and leaves—those known technically as blobs, lines, and spots.

### CLASS II.

Further brushwork forms, lily leaves and thick curves.

## UPPER PRIMARY SECTION.

### CLASS III.

Petals and right and left petal curves, with combination of all the past work.

### CLASS IV.

Various combination of past forms, making leaves, etc., and well-known flowers.

NOTE.—In brushwork the following are recommended for teachers' use :—

Longman's Charts of Colour, Drawing, and Design in three series, by Cecil L. Burns, Principal, School of Art, Bombay, together with a Teachers' Handbook explaining the charts (Rs. 18).

*Elementary series.*—Ten sheets containing alternate lessons in colour and geometrical drawing.

*Intermediate series.*—Ten coloured copies of leaf-forms with a sheet of geometrical problems and exercises showing their connexion with geometrical patterns.

The Book of School Colour Work, volumes I and II, by E. A. Branch, published by Evans Bros., London.

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## SYLLABUS OF THE COURSES IN NATURE STUDY AND ELEMENTARY SCIENCE.

1. The courses are compulsory for all pupils in Classes III and IV of Anglo-Vernacular Schools in *which satisfactory provision approved by the Director of Public Instruction has been made for staff and equipment.*
2. Two periods per week should be allotted to Compulsory Science, but in schools in which Manual Training is a compulsory subject in Classes III and IV the time given to Compulsory Science may be reduced to one period per week.

3. The results of the examinations in Compulsory Science in Classes III and IV should not be counted in deciding the class promotions of pupils.

4. In Classes III and IV English technical terms should be employed in the teaching of Science.

5. Schools are permitted to submit alternative courses for the approval of the department if they wish to depart from the model courses appended. This permission applies especially to schools in which Manual Training is a compulsory subject in Classes III and IV (vide para. 2 above).

### PREFATORY NOTE.

Critics of present-day educational systems in India make the same general complaint as was levelled some years ago against the education given in schools in England—the work done in schools is too bookish, and is not sufficiently related to the life of the pupils. Students in Indian schools can leave at the end of their school period in utter ignorance of the movements and workings of all that goes on in Nature round about them. The present syllabuses are put forward in the hope that, if well carried out, they will help to remove this defect.

One great advantage of work of this description is that it can, and should be the work of the pupils. The knowledge at which the course aims should be revealed to the pupil mainly as a result of his own observations. This power of observation is one of our most valuable possessions. Some persons are endowed with it to a greater extent than others, but there are few whose powers of observation cannot be greatly improved. We may at first be discouraged at the seeming lack of this power in our pupils—the points to be observed are, to our minds, so obvious that they cannot be missed, yet children fail to observe them. Guidance and suggestion are necessary to lead them to see what to us is obvious. The work is slow at first, and the children should not be hurried. It has to be remembered that the degree of observation depends largely upon what the observer knows ought to be present. One person (e.g., the teacher), knowing a thing is present and what it looks like, finds it, whilst another (the pupil), ignorant both of its presence and its appearance, may be unable to find evidence of it.

Observation should be *true*. Too often we find that observations are made in a careless slipshod manner. Often, too, a point may be visible in the teacher's specimen, but not in those in the hands of some of the pupils. In such cases the children should not be made to imagine they can see what is not really present.

Observation in itself is insufficient. *The child must express the results of his observation.* He may make a statement expressing in words what he has seen. He may write down or draw what he has

seen, expressing the results in symbols. He may model in clay or some other medium, thus expressing the result in form. But whatever be the type of expression, and whether in vernacular or English, clearness must be insisted upon. No one can express clearly what he does not know, so that clear expression of the results of an observation is itself the best evidence of good and true observation.

Besides observation and expression, thought is necessary. The pupil must be ever trying to find out the reasons for things. He must establish relationships between things. His conclusions may not always be correct; the sum total of the observations which he may make at the particular stage will perhaps be insufficient for the formation of a true judgment; but he must, nevertheless, be allowed to express his opinions. Further, an explanation which may be adequate at one stage may be inadequate at a later one. Just as we cannot expect the same completeness of observation and of expression from a child in Class III as from one in a higher class studying the same topic, so also we cannot expect the same degree of completeness and accuracy of thought.

Careful consideration of the syllabuses will show that a great deal of the work is of such a nature that the treatment of a particular topic cannot be allocated as an individual lesson. Much of the work done will consist of the making of a series of observations, watching growth and recording changes. It will be found an advantage if a period of five or ten minutes daily could be set apart for these general observations. The school garden, or a modification in the shape of numerous plants growing in pots, is a necessity. Thus the life cycle of a plant can be observed from the first swelling of the seed, through the sending out of root and shoot and the formation of flowers, to the casting of the seed which will recommence the cycle. It is clear that work like this cannot be done in one "lesson".

In a treatment of some topics it may be necessary to adopt a method which seems at first sight to be contradictory of the maxim that the pupil must gain his information mainly as a result of his own observations. But it has to be remembered that a little judicious help beforehand may be the means of helping a boy to gain an interest in finding something which he might be unable to find without some preliminary knowledge. For example, a teacher may wish his boys to observe the Plough and the Pole Star. If he lives in the school hostel with them no difficulty arises, as he can quite easily get them together in the evening. But if not, he can tell the boys, before dismissal, in what direction to look, about what time and about what height in the sky. He could draw a diagram on the blackboard showing the boys what they may expect to see. He should add to the interest by relating in regard to the stars in question some of the legends which he may have heard or read.

The syllabuses cannot be carried out successfully without a considerable degree of thought on the part of the teacher. He must look

ahead. Timely preparation is of the utmost importance. Material for Nature Study is all around us, but only he whose knowledge of Natural History is wide can make immediate use of most of the things he sees around. The teacher must *arrange* his material and must see that it is ready at the proper season. All this entails trouble, but the quickened intelligence of the pupils and their increased knowledge of, and interest in, things around will repay the enthusiastic teacher for his efforts.

## COURSE IN NATURE STUDY AND ELEMENTARY SCIENCE.

NOTE.—The starred paragraphs indicate work which is not required in the sequence of studies, but which is very valuable and should be included if time permits.

### CLASS III.

#### I. *Rainy Season.*

NOTE.—Plant "Caster" to furnish food for silkworms in cold season.

#### *Natural phenomena.*

#### 1. The effect of heat on water.

##### (a) Evaporation—

(1) Observations and experiences from daily life. Drying up of inkpots (ink being renewed more frequently in summer), pits, ponds, etc., drying up of wet clothes, etc.

##### (2) Experiments in class—

(i) Artificial by heating water in a flask.

(ii) Natural, by placing a drop or two of water in a dish in the sun and watching the consequent disappearance of the water.

##### (b) The presence of water vapour in the air—

(1) Observations and experiences from daily life—common salt in our homes becomes moist in this season; almost all articles of food become moist when kept for some time, e.g., *namkin* or *papar*.

##### (2) Experiments in class—

(i) Expose a little calcium chloride or some such substance on the table. It becomes moist.

(ii) The sides of a tumbler containing ice are covered with drops on the outside which must have come from the atmosphere.

##### (c) Condensation—

(1) Observations and experiences from daily life—

(i) Steam (visible) coming out from a boiling kettle (just above the liquid it is invisible).

(ii) Steam coming out of the pipes in engines (just near the mouth it is invisible).

(iii) We can see our breath on a winter morning, but not on a summer morning. Why?

(iv) A glass of cold water when brought in a warm room becomes covered with moisture. Why?

(2) Experiments in class—

Hold a piece of ice or some cold object in the jet of steam coming out of a flask of boiling water and note the effect, hold a red hot iron bar in the same way and note the difference in the effects produced in the two cases.

2. The effect of heat on air.

(a) Observations and experiments from daily life—

(1) Smoke generally goes up. Why?

(2) Paper balloons are let off in fairs and marriages; they have a flame burning inside and thus go on rising in the sky.

(3) A *tasha* (kettle-drum) has to be heated before being beaten.

(b) Experiments in class—

(1) Drop a few small pieces of paper, or some light substance, down the chimney of a burning lamp. They do not go down, but rise up.

(2) A football bladder half filled expands on heating.

3. Hot air can hold more invisible water vapour than cold air.

(a) Observations and experiences from daily life—

Compare the drying of wet clothes in summer, in winter.

(b) Have ready a flask of boiling water; take another empty flask, heat over spirit lamp, invert second flask over flask of boiling water; cork second flask and continue to warm it over flame. Cool the flask and notice the cloudiness. Also notice the observations under "Condensation".

4. The effect of cooling on the water vapour of the air.

(a) The formation of clouds—

(1) Observations and experiments—the same as noted under Condensation (1) and (2), respectively.

(b) Rain—

(1) Its formation—how the clouds further condense into rain by the running together of the particles of water forming drops which, unlike the clouds cannot remain suspended in the air. Observe the little drops of water falling from the steam coming out of a pot.

(2) Its disposal—

- (i) Part of it soaks through sandy soil—hence goes underground to re-appear again in spring and wells.
- (ii) Part of it is evaporated, perhaps to form clouds again.
- (iii) Part of it runs off the ground and forms streams, rivers and lakes.

NOTE.—All these facts are to be learnt from experiments and actual observations by the pupils.

(3) Its work—

- (i) It carries with it mud and sand, which it takes to rivers, streams, etc. These do the work of fertilizing, especially at flood times (the pupils have observed turbidity of flood water and a layer of soil left after a river flood).
  - (ii) It revives dried up vegetation, and animal and insect life becomes more abundant after the rains fall.
5. The main source of water and its distribution—
- (a) From former observations deduce that water vapour comes from every surface of water—especially from the ocean.
  - (b) Winds are the carriers of this moisture from the ocean to the interior of the land.
  - (c) After falling on land, some of it soaks in, the remainder again returns to the ocean or to the air.

*11. Cold and Hot Season.*

Plant and Animal life with emphasis on the former in the Cold and on the latter in the Hot season.

*A.—Plant Life.*

NOTE.—The pupils are, near the beginning of the season, to plant seeds of the plants here mentioned and are to watch the stages in their development.

1. Bean—To show structure of a dicot seed, food storage, germination, early simple and later compound leaves, development of fruit and attachment of seed.

2. *Lauki* or bottle gourd—To show trailing habit, modification of stem into a tendril, large water tubes.

\*3. Pea—To compare seed structure and germination with that of the bean, to show modification of a portion of the leaf into a tendril large stipules, a flower similar to that of bean, development of fruit.

*B.—Animal Life.*

1. Ants—Study their habits. Watch them travelling along an established path noticing what they carry, their conduct on meeting one another, their behaviour when the path is disturbed, etc. See paper stage.

2. Grasshopper—Behaviour, methods of locomotion, protective or warning colouration, shedding of skin; development of young compared with that of the silkworm or other caterpillar (there being no resting or pupal stage and less striking changes in form as the young becomes mature).

\*3. Eri Silk—At beginning of cold season procure eggs and follow the directions given in Pusa Bulletin no. 29.

\*4. Mason Bee—Behaviour, method of building, stocking of cells with food, examination of contents of the cells, development of young to adult stage.

\*5. Spider—How differing from an insect, aggressive colouration, spinning of web, enticing and capturing of prey.

\*6. Study of two selected insects which are found damaging farm or garden crops (to be found, if possible, in the school gardens). The life history is to be followed and the nature and extent of the damage to be noted.

\*7. General observation of four kinds of birds, including their recognition, food, nesting habits, etc.

#### CLASS IV.

##### I. Rainy Season.

##### A.—Plant Life.

1. Development of plants during the rains. Growth of seedlings and struggle due to crowding of one by another.

2. Roots—Forms, parts, functions, modifications.

3. Stems—Forms, parts, functions, modifications, difference between stem of *neem* and that of *palmyra*.

##### B.—Animal Life.

1. Frog—Collect eggs if possible (if not, tadpoles can be obtained), keep in school aquarium with water plants, watch and draw stages of development. Study habits of grown frog, food and feeding, method of breathing, movements of eyes, manner of jumping and of swimming.

2. Earthworm—Find castings during the rains. Notice and collect worms as they crawl out after a shower, or look for them at night with the aid of a lantern. Notice that though without eyes they are sensitive to light, quickly crawling away from it. Observe the bristles and study how they together with the muscles that lengthen and shorten the body are used in locomotion. Find young worms. Keep worms in the school room in a box of moist soil and observe growth and habits. Use of the earthworms to man.

\*3. Fish—Shape of body as adapted to mode of life, method of breathing, method of swimming, food habits.

\*4. Termite or white-ant—Study workers, observing them their task of building mud galleries. If possible, dig up a nest (fungus garden) and look for the queen in the wingless egg-laying stage. Discuss damage done, and means of preventing it.

\*5. Snail—External skeleton, method of locomotion, sense organs, behaviour.

## II. Cold Season.

### *Natural Phenomena.*

#### 1. The effect of cooling on the water vapour of the air.

##### (a) Dew—

##### (1) Observations and experiences from daily life—

- (i) More dew on a calm than on a windy night.
- (ii) More dew on a clear than on a cloudy night.
- (iii) Window panes are found damp and covered with very small drops of water.
- (iv) Is dew deposited more on a piece of slate, sheet of paper, blade of grass or bamboo? Why?

##### (2) Experiments in class—

- (i) Show that the outside of a glass containing ice or ice-cold water is covered with drops of water which might be compared with dew drops.
- (ii) Also place tepid water in a glass and note the difference in the effect.

NOTE.—The facts mentioned in (1) should be thoroughly discussed.

##### (a) Mist and fog.

##### Observations and experiences from daily life—

- (1) Mists are often seen early in the morning, sometimes at night.
- (2) Mountain tops or even hill tops are seen wrapped in mist; occasionally hillocks present a hazy appearance.
- (3) Fogs are seen on cold mornings near a lake or a river. Why?

##### (b) Difference between mist and fog and cloud.

It must be clearly brought out that fog is only a dense mist, and that cloud is nothing else but mist or fog formed high up in the air—only a difference of locality. Mist, fog and cloud are visible because the water has been partially condensed from the vapour form to small droplets.

#### 2. Resistance due to air.

Air is a substance. Ordinarily we do not seem to feel it except in a high breeze or storm. Make a boy walk briskly against the wind with a broad sheet of stiff paper placed flat in front of him and then make him walk holding the sheet edgewise and notice the difference.

3. Solids heat and cool more quickly than liquids.

(a) Observations and experiences—

- (1) Pupils have walked on sand at noon and at night also.
- (2) They have walked over stones and stone pavements at noon and at night also.
- (3) They have waded through some river or streamlet at noon and after dark also.
- (4) The water of wells in the morning feels warm in winter and cold in summer.

(b) Experiments in class.

Place in the sun pieces of solids—slate, iron, glass, etc., and also water and other liquids in dishes or cups, and after sometime let the pupils note the effect of heat. Place all these things in the shade and let them note the difference.

4. Where does air get heated—

- (a) most quickly,
- (b) most slowly?

The pupils know very well that the air over land surface—sand or gravel especially—gets more heated than that near a river or a lake. They feel the cool breeze when walking along the banks of a river or a lake and they feel warm breezes when nearing a sandy place.

### III. Hot Season.

#### A.—Natural Phenomena.

1. The heating power of the sun on different kinds of things, e.g., mud, wood, iron, liquids, air, etc.—

- (a) Draw upon the observations and experiences of the pupils. Notice how wood cracks; how iron expands (notice changes in joints of rails on a railway track in winter and in summer); how air expands (see experiment with football bladder in Class III).

- (b) With water the formation of currents in the ocean can be shown experimentally by hanging a piece of ice at one end of a trough full of water and having a heated iron rod (kept hot by a flame) at the other end. Pour some drops of a coloured liquid near the hot end and notice how they are

sent away to the other end, and how on striking the cold surface of ice they sink and again rise at the hot end and are again sent to the cold, and so on.

## 2. The effects of wind and heat on the earth.

### (a) Observations and experiences—

(1) As a whole—here draw the pupils' attention to—

(i) The cooling effect of *khaskhas tattis* in this weather.

(ii) How water kept in an earthen jar or *surahi* keeps cool.  
But this does not happen in the monsoon period.

(iii) Why perspiration has a cooling effect now, but in the rainy season it is so troublesome.

### \*Practical work on Natural Phenomena.

#### TO BE DONE IN CLASSES III AND IV.

Tabular or graphical records of various kinds should be kept by the teacher. These may be arranged in a very elementary manner to suit the understanding of the students. The records may be approximate and comparative ones, e.g., as of rain, much, little or none; of temperature, very hot, hot, cool, etc.

#### \*Class records to be kept of—

1. Temperature.
2. Wind and its direction.
3. Clouds.
4. Rain.
5. Thunder storms.
6. Rain storms.
7. Dust storms.
8. Dew, mist, fog.

NOTE.—For clouds the following is an easy method of reckoning :—

High clouds	...	...	...	...	...	1
Medium clouds	...	...	...	...	...	2
Low clouds	...	...	...	...	...	3

\*As the seasons vary so greatly stress should be laid on keeping the appropriate records.

#### \*Records should be kept of—

- (1) Sunrise and sunset—the varying lengths of days and nights.
- (2) No moon visible, full moon, and other phases.

\*In favourable localities excursions should be made to see places and things of general interest of which pupils have heard or read, e.g., a river in flood; the effects of a great storm of hail or rain or snow; the effects of a forest fire; a landslide due to rain or an earthquake, etc.

*B.—Plant Life.*

Leaves—Forms, parts, arrangement with reference to light, food-making. Importance of plants as source of food for animals. *Rôle* of plants in purifying air left impure by animals.

*C.—Animal Life.*

1. General observation of four birds, in addition to those studied in the previous year. Body, structure of the bird and its adaptation to its mode of life.

2. General observation of, and gathering information about, several native mammals, such as the wild cat, the mongoose, the porcupine, the jackal.

*\*General sky observation.*

Summarized in two or three lessons each in Classes II and IV inclusive.

*Class III.*—Simple observation of the sun on a large number of days in the year (*a*) at sunrise, (*b*) at midday, (*c*) at sunset. Lead before end of year to generalizations.

(*a*) Sun is always in the south at midday. Sometimes it is higher than at others and casts a shorter shadow.

(*b*) Sun always rises in the east but sometimes more to south or north than at other times.

(*c*) Sun always sets in the west, but sometimes more to south or north than at other times.

*Class IV.*—Changes in the position and appearance of moon throughout its monthly course. The moon should be drawn. Simple information about the moon.

*Books recommended for the course in Nature Study and Elementary Science :—*

For teachers—

(1) Familiar Indian Animals (Teachers' Handbook to "Animals of India"), by F. Finn (12 annas), with animal wall sheets. (Macmillan & Co.) Unmounted sheet, Rs. 2 each.

(2) Birds of an Indian Village, by Douglas Dewar, Oxford University Press, Calcutta, 1921, Re. 1-4-0.

(3) Plant Studies for Indian Schools, by I. C. Fortey (Blackie & Son, 1921), Re. 1-8-0.

(4) Plant Studies for Indian High Schools, by L. A. Kenoyer, Professor, Agricultural Institute, Allahabad, published by the Christian Literature Society, United Provinces Branch, Allahabad, Re. 1-8-0.

## SYLLABUS OF THE COURSES IN OBJECT LESSONS.

(Vide the scheme of Object Lessons issued by the department separately.)

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## SYLLABUS OF THE COURSES IN PHYSICAL TRAINING.

### PHYSICAL TRAINING.

The following course of exercises and games is suggested :—

1. Scout Drill.
2. Group games such as kabbadi, pick-a-back race, relay race, crocodile race, hockey, football, etc.
3. Sports-jumps, running, climbing, phari, gatka, etc.
4. Marching, formation of ranks, etc.

NOTE.—Heads of institutions are at liberty to introduce other games and exercises which they consider useful for their students.

A. H. MACKENZIE, M.A., C.I.E.,

*Director of Public Instruction,*

*United Provinces.*

ALLAHABAD :

March 19, 1932.



**Curriculum for the Infant and Primary classes of Anglo-Vernacular Schools for girls who wish to read up to the High School Examination of the Board of High School and Intermediate Education, United Provinces, for 1932-33.**

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The courses and text-books are the same as those prescribed in the curriculum for the infant and primary classes of Anglo-Vernacular Schools for boys for 1932-33 subject to the following modifications :—

(1) In classes I to IV girls may read the following Vernacular Readers for girls, in place of the Vernacular Readers prescribed for boys :—

**CLASS I.**

*Urdu.*—First half of Lower Primary Girls' Reader, by M. B. Hill, Indian Press, Allahabad (8 annas); or Bal Chandrika in Urdu, Pahlī Kiran by Vinapani, published by the Hindi Press, Allahabad, 1928 edition (inferior quality of paper 3 annas, superior quality of paper 3 annas 6 pies); or Lower Primary Reader for girls, Part I, published by the Newal Kishore Press, Lucknow. (3 annas 9 pies).

*Hindi.*—First half of Lower Primary Girls' Reader, by M. B. Hill, Indian Press, Allahabad (8 annas); or Bal Chandrika in Hindi, Pahlī Kiran, by Vinapani, published by the Hindi Press, Allahabad, 1928 edition (inferior quality of paper 3 annas, superior quality of paper 3 annas 6 pies); or Lower Primary Reader for girls, Part I, published by the Newal Kishore Press, Lucknow. (3 annas 6 pies).

**CLASS II.**

*Urdu.*—Second half of Lower Primary Girls' Reader, by M. B. Hill, Indian Press, Allahabad (8 annas); or Bal Chandrika in Urdu, Dusri Kiran, by Vinapani, published by the Hindi Press, Allahabad 1928 edition (inferior quality of paper 4 annas, superior quality of paper 4 annas 6 pies); or Lower Primary Reader for girls, Part II, published by the Newal Kishore Press, Lucknow. (4 annas 6 pies).

*Hindi.*—Second half of Lower Primary Girls' Reader, by M. B. Hill, Indian Press, Allahabad (8 annas); or Bal Chandrika in Hindi, Dusri Kiran, by Vinapani, published by the Hindi Press, Allahabad, 1928 edition (inferior quality of paper 4 annas, superior quality of paper, 4 annas 6 pies); or Lower Primary Reader for girls, Part II, published by the Newal Kishore Press, Lucknow. (4 annas).

## CLASS III.

*Urdu.*—First half of Upper Primary Girls' Reader, by M. B. Hill, Indian Press, Allahabad (9 annas); or Bal Chandrika in Urdu, Tisri Kiran, by Vinapani, published by the Hindi Press, Allahabad. 1928 edition (inferior quality of paper 5 annas, superior quality of paper 5 annas 6 pies); or Upper Primary Reader for girls for class III, published by the Newal Kishore Press, Lucknow. (4 annas 9 pies.)

*Hindi.*—First half of Upper Primary Girls' Reader, by M. B. Hill, Indian Press, Allahabad (9 annas); or Bal Chandrika in Hindi, Tisri Kiran, by Vinapani, published by the Hindi Press, Allahabad, 1928 edition (inferior quality of paper 5 annas, superior quality of paper 5 annas 6 pies); or Upper Primary Reader for girls for class III, published by the Newal Kishore Press, Lucknow. (4 annas 6 pies).

## CLASS IV.

*Urdu.*—Second half of Upper Primary Girls' Reader by M. B. Hill, Indian Press, Allahabad (9 annas); or Bal Chandrika in Urdu, Chauthi Kiran, by Vinapani, published by the Hindi Press, Allahabad, 1928 edition (inferior quality of paper 5 annas, superior quality of paper 5 annas 6 pies); or Upper Primary Reader for girls for class IV, published by the Newal Kishore Press, Lucknow. (4 annas 6 pies).

*Hindi.*—Second half of Upper Primary Girls' Reader, by M. B. Hill, Indian Press, Allahabad (9 annas); or Bal Chandrika in Hindi, Chauthi Kiran, by Vinapani, published by the Hindi Press, Allahabad, 1928 edition (inferior quality of paper 5 annas, superior quality of paper 5 annas 6 pies); or Upper Primary Reader for girls for class IV, published by the Newal Kishore Press, Lucknow. (4 annas 3 pies).

(2) The course in Nature Study and Elementary science does not apply to girls' schools.

But in girls' schools there may be an optional course in "Observation Lessons and Nature Study," classes III and IV; the course must be approved by the Inspectress of Girls' Schools.

(3) Sewing will be an additional compulsory subject from Infant Class A to Class IV.

(4) Calisthenics may be taught in place of drill.

The course in Sewing is as follows:—

## PREPARATORY SECTION.

## INFANT CLASS A.

Threading a needle; making knots; use of thimble; tacking and running.

INFANT CLASS B.

Running; running double seams; placing; twisting threads; back-stitching.

*Optional.*—Spinning.

LOWER PRIMARY SECTION.

CLASS I.

Practice in running and back-stitching; top-sewing; hemming.

*Optional.*—Chikan-stitch; *kachcha-phanda*. *ulti-bakhya* (stem-stitch); spinning.

CLASS II.

Hemming; run and fell, knitting with two needles (plain); darning stitch on untorn material.

*Optional.*—Chikan-stitch, *pakka-phanda*; hem-stitching, crochet (chain-stitch); spinning.

UPPER PRIMARY SECTION.

CLASS III.

Sewing on buttons and tapes and loops, button hole stitch; darning a hole; gathering and setting in; knitting (plain and pure); casting on and off with two needles.

*Optional.*—Chikan-stitch; *sursiri*; crochet; feather-stitching; spinning.

CLASS IV.

Darning; patching; knitting on four needles (plain and pure); button-holes; practice of stitches previously learnt: to cut out and make up a simple garment, e.g., *kurta* or *pinafore*.

*Optional.*—Chikan-stitch; *bakhya*; *hathkati*; crochet; satin-stitch; spinning.

Book recommended for the use of teachers:—

Silai Darpan or Silai ki Kitab, Part I (Hindi and Urdu), by Srimati Laiq-un-Nisa, 1st edition, 1929, published by Rai Sahib Ram Dayal Agarwala, Bookseller and Publisher, Katra, Allahabad (Rs. 2 each version).

A. H. MACKENZIE, M.A., C.I.E.,

Director of Public Instruction.

United Provinces.

ALLAHABAD :

March 19, 1932.



**Alternative curriculum for the Infant and Primary classes of A.-V.  
Schools for girls who do not wish to read for the High School  
Examination of the Board of High School and Intermediate  
Education, United Provinces, for 1932-33.**

**PREFATORY MEMORANDUM.**

Head mistresses and managers are permitted, with the approval of the Inspectress, and in conformity with the general principles that underlie the curriculum, to make modifications in the distribution of the work in any subject among the various classes.

Object Lessons have been prescribed as an optional subject from Infant Class B to Class IV, but the subject should not be introduced into any school without the permission of the Inspectress, who should satisfy herself that trained teachers are available and can be spared for teaching them. In no case should the work be entrusted to untrained teachers.

The teaching of English by the Direct Method should not be attempted except by specially trained teachers. Where such teachers are not available in sufficient numbers for all classes, a teacher or teachers, qualified to give such instruction might be employed to supplement the ordinary class teaching by taking classes separately for an hour or so a week each.

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**ABSTRACT FROM THE MEMORANDUM ON  
HOME LESSONS.**

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*Issued under the authority of G. O. no. 790/XV—212, dated the 19th  
August, 1910, Education department.*

The aim in setting home lessons should be that a girl should be able to prepare her tasks thoroughly, and yet have sufficient spare time to devote to healthy recreations, mental and physical, of her own choice :—

- (a) In the Lower Primary and Preparatory sections no home lessons should be set at all. If the school hours are properly utilized, there is ample time for the teacher to teach and for the scholar to learn and apply what she has been taught.

(b) In the Upper Primary section the approximate time to be devoted to home lessons should not exceed *one hour*.

(2) Home work should not be exacted from a scholar in too many subjects on the same day, nor too much in one subject. In this matter the head mistress must exercise controlling authority over the class teachers. She should enquire from them from time to time what amount of work is set in the various subjects, and should see that too much time has not to be given to the study of one subject at the expense of another.

(3) Home work is one of the most important means whereby the student can be trained in the habit of doing things for herself. It must be something which she can accomplish on the basis of what she has learnt in school, not something beyond her powers which necessitates recourse to the assistance of a private tutor. A girl who is always being helped in the preparation of her home work by a private tutor loses confidence in herself and the habit of doing things independently. Moreover, work which is the result of collaboration with a private tutor affords no criterion of the girl's capacity, progress or industry.

(4) Home work should be not only such as can be done without assistance, but such as implies effort. It should never be merely mechanical exercise which involves no intellectual exertion. It should not, for example, consist of the transcription of "rough" work done in school. Under the influence of unsound tradition there has been, and still is, much waste of labour in this way. Such work is manual not mental, and should be altogether unnecessary for girls who have been trained in habits of neatness and accuracy.

(5) It cannot be expected that girls should break much new ground for themselves. They should therefore be almost exclusively occupied in going over the ground already covered in class, and this work of assimilation should be tested by the teacher at the beginning of a fresh lesson. It may therefore be laid down as a general rule that written exercises upon matter not already taught in school should rarely be set in the Upper Primary section. The work at home should take the form of recapitulating the work done in the day and of training the memory, which at this stage may be most usefully exercised. But since scholars cannot be expected to take much interest in what they find neglected by the teacher, written exercises should be punctually corrected and returned to them as soon as possible. It is most important that the work of this nature should never be allowed to fall into arrears.

(6) There is a tendency to relegate too much written work to out-of-school hours. It cannot be too strongly emphasized that the best means of training pupils to write clearly, to arrange their work

neatly, and to take pains is to insist on these points in class note-books used in school under the eye of the mistress. There is plenty of time in school for written work of the nature of applying knowledge, if the teacher arranges her lesson properly. It may, in fact, be laid down as an almost invariable rule that no written work should be set as part of home lessons in the following subjects:—Arithmetic and original composition, nor should work be set in copy-book writing, in drawing or in elaborate map-making.



Alternative curriculum for the Infant and Primary classes of A.-V. Schools for girls who do not wish to read for the High School Examination of the Board of High School and Intermediate Education, United Provinces, for the session beginning in July 1932.

Subjects of study.

PREPARATORY SECTION.

INFANT CLASS A.

1. Reading (Urdu or Hindi).
2. Writing ( " " " ).
3. Arithmetic.
4. Sewing.
5. Drawing on blackboard (optional).
6. Brushwork ( " ).
7. Clay-Modelling ( " ).
8. Kindergarten Games ( " ).

INFANT CLASS B.

1. Reading (Urdu or Hindi).
2. Writing ( " " " ).
3. Arithmetic.
4. Sewing.
5. Drawing on blackboard (optional).
6. Brushwork ( " ).
7. Object Lessons ( " ).
8. Clay-Modelling ( " ).
9. Kindergarten Games ( " ).

LOWER PRIMARY SECTION.

CLASS I.

1. Reading (Urdu or Hindi).
2. Writing ( " " " ).
3. Arithmetic.
4. Sewing
5. Drawing (optional).
6. Brushwork ( " ).
7. Geography\* ( " ).
8. Object Lessons ( " ).
9. Clay-Modelling ( " ).
10. Clay-modelling ( " ).

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\*To be introduced where the school wishes to do it and can make satisfactory arrangements for teaching it.

## CLASS II.

1. Reading (Urdu or Hindi).
2. Writing ( " " " ).
3. Arithmetic.
4. Sewing.
5. Drawing (optional)
6. Brushwork ( " ).
7. Geography\* ( " ).
8. Object Lessons ( " ).
9. Clay-Modelling ( " ).
10. Calisthenics ( " ).

## UPPER PRIMARY SECTION.

## CLASS III.

1. English.
2. Vernacular (Urdu or Hindi).
3. Arithmetic.
4. Geography.
5. Sewing.
6. Hygiene.
7. Drawing (optional).
8. Brushwork ( " ).
9. Object Lessons ( " ).
10. Clay-Modelling ( " ).
11. Calisthenics ( " ).
12. Cooking ( " ).

## CLASS IV.

1. English.
2. Vernacular (Urdu or Hindi).
3. Arithmetic.
4. Geography
5. Sewing.
6. Hygiene.
7. Drawing (optional).
8. Brushwork ( " ).
9. Object Lessons ( " ).
10. Clay-Modelling ( " ).
11. Calisthenics ( " ).
12. Cooking ( " ).

\*To be introduced where the school wishes to do it and can make satisfactory arrangements for teaching it.

## ENGLISH.

### AIMS IN THE TEACHING OF ENGLISH.

The aims in the teaching of English are—

A. *Practical*.—To enable the pupil—

- (1) to speak and read aloud English with correct pronunciation and some degree of facility;
- (2) to understand the language when spoken;
- (3) to write the language with grammatical correctness and with facility.

B. *Literary*.—To enable the pupil to read intelligently for pleasure modern English prose and poetry of moderate difficulty.

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### SYLLABUS OF THE COURSES IN ENGLISH.

#### UPPER PRIMARY SECTION.

##### CLASS III.

*Conversation and reading*.—The early stages of instruction will be mainly oral and should include systematic training in the sounds of spoken English in connexion with pronunciation of easy words. By the end of the year the class should be able to carry on simple conversation about familiar objects and actions.

To read with correct pronunciation an easy primer, to render into the vernacular easy sentences from the primer, to use the words of the primer in simple sentences, and to answer in English simple questions based on the matter in the primer.

*Spelling and writing*.—To spell the words of the primer; copy-writing in ruled books of easy familiar words; writing in copy-books (in the latter half of the course); dictation in ruled books of words and sentences previously read in the primer.

##### CLASS IV.

*Conversation and reading*.—To converse about common objects and actions, to read with correct pronunciation from a reader, to render into vernacular easy sentences from the reader, to use the words of the reader in simple sentences, and to answer in English simple questions based on the matter in the reader.

*Spelling and writing*.—To spell the words of the reader; dictation in ruled books of words and sentences previously read in the reader; writing in copy-books.

*Grammar*.—To point out nouns, pronouns, and verbs.

# TEXT-BOOKS.

In Classes III and IV the following primers and readers are prescribed :—

Class.	Nelson's Readers.	Christian Literature Society's Readers.	Macmillan's Readers.	Tipping's Rapid Reading Series (Macmillan & Co., Ltd., Calcutta).	Longmans' Readers.	The New Method Indian Readers. Gulab Singh & Sons.	Blackie & Sons.	The Indian Class Readers (K. and J. Cooper, Bombay).	George G. Harrap's Readers.
III	Primer.	Indian Reader, Primers, I and II (4 annas each).	King Primer (5 annas) or Conversational Readers, First Primer (2 annas) and Second Primer (3 annas), or Macmillan's Modern Indian Reader. The Primer (1923 edition) (3 annas).	Primer 1 (4 annas and 6 pies).	Longmans' English Course for Indian schools—1st year teacher's book (8 annas). For teachers' use only, or English Made Easy Book, by J. C. Allen (5 annas). [Conversional Picture nos. 1—6 by J. C. Allen (Re. 1 each) are recommended for class use with the book] or the New Method Reader IA (Primer), by Michael West (6 annas).	..	The Star of India Readers' Book (5d.) New Indian Empire Readers (Primer) (4 annas), 1927 edition. or The Koh-i-Noor Readers (Primer), by M. S. H. Thompson. (5 annas)	Primer, by P. C. Wren (6 annas). Teachers' Handbook to the Primer of Indian Class Readers, by P. C. Wren. (For use only).	A Child's First Reader by A. M. Goode (3 annas). and A Child's Second Reader, by A. M. Goode (3 annas).

IV	Reader no. 1 (6 annas).	New English Reader I (5 annas), or Conversation- al Readers, Readers I and II (3 annas each), or Macmillan's Modern Indian Readers, Book I (5 annas).	Primer II (6 annas).	1st year reading book (4 annas); or the new Method Reader IB, by Michael West (6 annas).	Book I (10 annas).	The Star of India Readers-Book II (7d) New Indian Empire Readers, Part I, 1927 edition (6 annas). or The Koh-i-Noor Readers, Reader I, by M.S.H. Thompson, (6 annas).	Reader I, by P. C. Wren (7 annas). Teachers' Handbook to Reader I of Indian Class Readers, by P. C. Wren. (For teachers' use only).
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Books recommended for the use of teachers :—

English for India, Books I and II, by T. O. Hodges, 1926 edition, published by Macmillan & Co., Ltd., Calcutta (Book I—3 annas & Book II—8 annas).

The English copy-books to be used are :—

Class.	Series.					Oxford copy-books. (Oxford University Press, Calcutta.)
	Macmillan's Official copy-books (James Coles).	Macmillan's Imperial copy-books.	Longmans, Green & Co.		Blackie's Manuscript Writing copy-books.	The "A. L." Print Writing copy-books by George A. Langley Water. (B.I. Arnold & Sons.)
III and IV	1, 2, 3, 4, (1 anna and 6 pies each).	1, 2, 3, 4, (2 annas and 6 pies each).	Upright	Semi-Upright	1, 2, (3 annas each).	1, 2, (3 annas each).
			1, 2, 3, (Re. 1-8-0 per dozen).	2, 3, 4, (Re. 1-8-0 per dozen).	1, 2, (1 anna 6 pies each).	I, II, III, IV (2 annas each).

## MATHEMATICS.

### AIMS AND METHOD IN THE TEACHING OF MATHEMATICS.

*Reasons for teaching Mathematics.*—We teach Mathematics with a twofold aim. On the one hand we use the subject as a means of developing the intelligence of the pupil, on the other hand we endeavour to make her skilful in such operations with numbers as are likely to be of practical use. Thus the teacher will endeavour to make clear to pupils the reasons which underlie processes; and will also train them to gain the power of rapid, accurate, and confident calculation.

*Neatness and arrangement in written work.*—Great stress should be laid on neatness and care in arrangement. Errors in working can often be traced to slovenly arrangement or badly-formed figures. Pupils should be trained to arrange their work in a series of logical steps for each of which a reason can be given. Particular care should be taken in the early stages that units are not omitted, and that every line is a correct statement.

*Oral work.*—All new processes should be introduced and fixed in the mind by means of examples worked on the black-board. These should involve only small numbers, so that calculations may be performed without resort to pen and paper. Even after a new rule has been established "Mental Arithmetic" should be a feature of most lessons. A few minutes given daily to the oral solution of problems is a valuable means of revising past work and in training pupils to gain rapidity and confidence in calculation. Up to class IV the teaching should be largely oral.

*Concrete illustrations.*—Wherever possible concrete aid should be used. In the earliest stages the various operations should be taught by means of illustrations with objects which can be easily procured, such as headless matches, nuts, etc.

Tables of weights and measures should be visualised by measurements of lengths, areas, volumes, capacities and weights; pupils should be practised in estimating the weights of common objects, the heights of tables and rooms, the areas of surfaces, the capacity of vessels, and the distances between fixed points in the class-room and play-ground; and should verify their estimates by experiments.

*Nature of examples.*—Once a rule has been learnt it should be applied to varied examples, both oral and written. Examples should, as far as possible, relate to matters within the experience of pupils, and the numbers employed should be such as are likely to occur in practice; thus although pupils should be made familiar with operations in British money, prices in problems should, as a rule, be given in Indian money. Operations with large numbers should be the exception, and when they are employed they should be taken from real life. To test the grasp

of a new process and to connect it with what has been already learnt, it should be applied to problems which involve also the application of previous rules; thus no preceding rule should be allowed to drop out of sight.

*Revision.*—In no subject is revision more necessary than in Mathematics. As the mental machinery of pupils becomes somewhat rusty from lying up for the vacation such revision is especially necessary at the commencement of each session.

*Text-book.*—Even the best text-book cannot take the place of the teacher. She has to expand the theory, which is usually a brief summary; she has also to provide the concrete illustrations to break down the artificial barriers which separate topic from topic and to supplement the lists of examples by supplying oral questions and by inventing problems which are likely to bring the subject into close touch with the interests of the pupils.

## SYLLABUS OF THE COURSES IN ARITHMETIC.

### PREPARATORY SECTION.

#### INFANT CLASS A.

Notation and numeration from 1 to 50 to be taught by means of concrete objects. Oral addition and subtraction of numbers whose sum does not exceed 20 in connexion with concrete objects.

#### INFANT CLASS B.

Notation and numeration to 100 to be taught by means of concrete objects. Addition and subtraction of numbers whose sum does not exceed 100. Construction and memorizing of tables  $5 \times 10$ . Simple oral problems on the above.

*NOTE.*—Problems should be introduced as soon as a new rule is begun.

### LOWER PRIMARY SECTION.

#### CLASS I.

*Revision.* Notation and numeration to 1,000. Construction and memorizing of tables  $10 \times 10$ . The four simple rules with no term or answer exceeding 1,000. Simple factors and multiplication and division by factors.

*NOTE.*—Short division should be taught before long division and should be used wherever possible.

Simple oral and written problems on the above.

#### CLASS II.

*Revision.* Notation and numeration to crores. Construction and memorizing of tables up to  $16 \times 12$ . The tables of Indian money and weights with exercises in reduction. The four compound rules with miscellaneous problems. (Terms with many digits must not be used.) Oral exercises on all the rules learnt.

## UPPER PRIMARY SECTION.

## CLASS III.

Revision. Tables of times and linear and square measures in common use with application to simple problems. Domestic accounts. Simple idea of vulgar fractions with denominators limited to 3, 4, 5, 6, 10, 12, 16. Oral and written problems on the above.

## CLASS IV.

Revision of previous work. Vulgar fractions; all examples to be simple and to be limited to two or three terms only, with small numbers as numerator and denominator. L. C. M. to be taught as required for the addition and subtraction of fractions. Simple examples in unitary method.

## TEXT-BOOKS.

## Arithmetic.

The books recommended for use are :—

*Classes I and II.*—Girls' Lower Primary Arithmetic (Urdu or Hindi), Macmillan & Co. (Urdu, 11 annas; Hindi, 10 annas); or Girls' Primary Arithmetic, Book I (Urdu or Hindi), by K. C. Bhattacharya, Indian Press, Allahabad (12 annas each).

*Classes III and IV.*—Anglo-Vernacular School Arithmetic for Classes III and IV (Urdu or Hindi), published by Ram Narayan Lal, Allahabad (Urdu, 10 annas; Hindi, 9 annas and 3 pies); or Modern Arithmetic, Part I, revised edition (Urdu or Hindi), published by the Indian Press, Allahabad (8 annas); or Model Arithmetic, Book I, (Urdu or Hindi), by Shyam Behari Lal Kapur, published by the Agarwal Press, Allahabad (8 annas each).

These Arithmetic books are recommended for the provisionally, pending the publication of new arithmetics for girls' schools.

## GEOGRAPHY.

## AIMS AND METHOD IN TEACHING GEOGRAPHY.

Geography is on the one hand a study of the configuration of the earth—its continents, seas, mountains, forests, rivers, etc.; on the other hand it is a study of the needs of man and how he makes provision for these needs. Thus we only partly teach Geography if we limit our teaching to a study of physical facts; the chief value of these facts is that they help us to understand how men live and work in different parts of the earth.

In studying a country consider it first as a whole—its general build, the long and short slopes of the land, the way in which rivers run, where there are large fertile tracts, where deserts and where forests. Then in more detail, the great mountain ranges, the chief river basins, the great plains, the climate, the population and occupations, the political divisions, the trade routes and towns. For each of these topics a separate map should be drawn on the blackboard and by the pupils.

The teaching should not be confined to a mere list of names. Facts are of value only if brought into relation with other facts. The teacher should point out why here there is a forest, there a desert; how the nature of the coast has promoted intercourse with other countries, how mountains have prevented intercourse; how rivers have promoted trade and density of population; what natural resources have given rise to particular industries; how the climate has influenced the life and work of the people. Facts are needed and must be learnt; but a fact is remembered with greater ease if it is understood, and facts are of use only if we can connect them with causes and results.

In giving facts to the class something more than a bare recital is needed. No subject makes greater demands on the descriptive powers of the teacher. She should endeavour to carry the pupils in imagination to the country she is describing; to do this she should, as far as possible, supplement vivid description by pictures, photographs, picture postcards, and, if suitable arrangements can be made, lantern slides.

*Sketch maps by pupils.*—The pupil's note-book should contain a series of sketch maps for each country, each map illustrating a particular feature. Thus one map should contain the mountain system, a second map the river system, a third the distribution of rainfall, and so on. Almost every topic discussed can be illustrated by a sketch map and benefits thereby. In order to draw these sketch maps it is not necessary for pupils to learn to draw the outline by heart, except perhaps in the case of India, whose outline is easily remembered. The teachers should supply blank outline maps (cyclostyled or printed), and these should be used to illustrate various topics. Many maps, each illustrating a single feature, are preferable to one elaborate map crowded with details.

*Blackboard maps by the teacher.*—These should be built up as the lesson proceeds; each map should contain the elements essential to the lesson and no others. Coloured chalks are a valuable help; they make the various features stand out clearly from one another, and if the same colour be used consistently to represent the same features, e.g. red for high land, blue for rivers, yellow for towns, etc., much time will be gained. Outline maps drawn on blackboard cloth are convenient as the basis for these maps; they may be procured from Messrs. G. Phillip & Son, through Messrs. Longmans, Green & Co., Bombay.

**SYLLABUS OF THE COURSES IN GEOGRAPHY.**

**LOWER PRIMARY SECTION.**

**CLASS I.**

Story lessons describing the life of children in Arabia, Japan, Africa, and of the Esquimos.

NOTE.—The course should be introduced where the school wishes to do it and can make satisfactory arrangements for teaching it.

**CLASS II.**

Story lessons describing the life of children in England, Russia, Italy, Holland and France.

NOTE.—The course should be introduced where the school wishes to do it and can make satisfactory arrangements for teaching it.

**UPPER PRIMARY SECTION.**

**CLASS III.**

*General Geography.*—Measurement of distances; direction, North, South, East, West, North-East, North-West, South-East, South-West, drawing of North and South line in playground by means of shadow cast by vertical stick; meaning of scale; plan of class-room; plan of school and playground; explanation of the map of the district; description of town or village in which the school is situated and of surrounding country.

**CLASS IV.**

*General Geography.*—Revision of the work of Class III.

The Himalayas, the Deccan Plateau, the Eastern and Western Ghats, the coast strips and the towns, Calcutta, Madras, Bombay, Delhi, Allahabad, Lucknow, and Cawnpore.

Description of Northern India with reference to the nature of the country and the climate.

The following maps to be drawn by the pupils:—

- (1) Map of India, showing the Himalayas, the Sulaiman Mountains, the Vindhya, the Indus with the five rivers of the Punjab, the Ganges with its main tributaries, the position of the United Provinces.
- (2) Map of the United Provinces showing divisions and their headquarters.

*The World.*—Shape of the Earth, its rotation, light and darkness, land and water, the names and relative position on the globe of continents.

NOTE.—Where arrangements can be made, oral lessons should be given in Classes III and IV describing typical scenery or the life of man in various parts of the world. They should be illustrated by pictures, lantern slides, etc. In preparing these lessons the teachers should consult the following books :—*World Pictures*, by J. B. Reynolds (Black) (3s. 6d.); *Man in Many Lands*, by Lyde (Black) (6s.); and the *Peeps at Many Lands Series* (Black) (3s. each.)

*Physical Geography.*—Explanation of the following terms by reference to the globe and map :—Continent, ocean, gulf, bay, lake, strait, cape, peninsula, isthmus, mountain, island. Description of the sea.

### TEXT-BOOKS.

#### Geography.

*Class IV.*—Anglo-Vernacular School Geography, Book I, Part I (Urdu or Hindi), published by Longmans, Green & Co. (Urdu, 10 annas; Hindi, 8 annas).\*

or

A preliminary Geography of India and Asia with the British Empire in Outline, Book I (Urdu or Hindi). Indian Press, Allahabad (Re. 1).

Books recommended for teacher's reference for Classes I and II are :—

*Little Folks in Many Lands.* (Blackie & Son, Bombay.) (2s.)

*Each and All.* Jane Andrews. (Green & Co., London.)

*Seven Little Sisters.* Jane Andrews. (Green & Co., London.)

*Little People in Far Off Land Series.* F. Tapsell. (Arnold & Son, Leeds.) (3d. each.)

These Geographies are recommended for use provisionally pending the preparation of new Geographies for Girls' Schools.

### VERNACULAR.

#### AIMS AND METHOD IN THE TEACHING OF VERNACULAR.

The aim of the study of the Vernacular is—

(1) to enable the pupils to understand and to appreciate Vernacular literature;

(2) to train them in clear and idiomatic expression.

*Method of teaching.*—The subject-matter of the lessons should from the first be made the basis of conversation in order that the pupils

\*The Anglo-Vernacular School Geography, Book I, Parts I to III (Urdu or Hindi) is also available in one volume (Urdu, Rs. 2-4; Hindi, Rs. 1-4.)

may grasp its meaning and take an intelligent interest in it. Difficult words and phrases should be explained with reference to their context and not by substituting synonyms except in the cases where the latter are very familiar to the pupils. In reproducing a lesson the pupils should be trained to single out the salient facts or ideas, and should not merely give a running paraphrase of its entire contents.

The teaching of composition should begin with oral work in the lowest classes; by its means the children will learn to frame sentences, to use the new words and phrases learnt in their reading, and to give expression to their thoughts. When they have some mastery of writing and spelling written composition should be given regularly, the subjects should be simple and familiar, and the main aim of the work should be to train the pupils in clear and straightforward expression.

*Handwriting*.—*Takhtis* should invariably be used in the preparatory section and Class I. In Class I writing on paper with reed pens may be begun, but practice in writing on *takhtis* should still be given periodically. Slates should never be used either for copies or dictation in any of the classes. Reed pens must be used for copy-writing and transcription, and ordinary English pens should never be used for Vernacular script. Great care should be taken from the very beginning that the pupils should acquire the right method of holding and turning their pens. The position in writing must be regarded as of great importance; *takhtis* should be supported on the knee and copy-books should be placed either on a *takhti* correctly held or on a desk.

## SYLLABUS OF THE COURSES IN VERNACULAR. (URDU OR HINDI.)

### PREPARATORY SECTION.

#### INFANT CLASS A.

*Reading*.—To read correctly words and easy sentences from a primer.

*Writing*.—To copy characters and easy words from a primer. Special *takhtis* with letters and figures in indelible ink are recommended for use.

#### INFANT CLASS B.

*Reading*.—To read sentences at sight from the text-book; to know the meanings of words; and to answer questions on the subject-matter of the reader.

*Writing*.—To copy sentences from the text-book in Urdu or Nagri character. Special *takhtis* with letters and figures in indelible ink are recommended for use.

LOWER PRIMARY SECTION.

CLASS I.

*Reading.*—To read accurately at sight from the text-book; to explain the meanings of words and sentences; and to answer questions on the subject-matter of the reader. *Recitation.*

*Writing.*—To write sentences to dictation from the text-book in Urdu or Nagri character. Copy-books to be shown.

CLASS II.

*Reading.*—To read correctly at sight from the text-book; to explain the meanings of words and sentences; and to answer questions on the subject-matter of the reader. *Recitation.*

*Writing.*—To write sentences to dictation from the text-book in Urdu or Nagri character. Copy-books to be shown.

UPPER PRIMARY SECTION.

CLASS III.

*Reading.*—(a) To read at sight from the text-book; to explain the meaning of words and sentences; and to give the substance of the lesson in their own words. *Recitation.*

(b) Oral teaching of elementary Grammar in its practical application.

*Writing.*—To write passages to dictation from a book of equal difficulty with the text-book in Urdu or Nagri character. Copy-books to be shown.

CLASS IV.

*Reading.*—(a) To read at sight from the text-book and to explain words, allusions, and sentences. *Recitation.*

(b) *Grammar.*—Etymology.

*Writing.*—To write passages to dictation from a book of equal difficulty with the text-book or an original letter on some ordinary topic in Urdu or Nagri character. Copy-books to be shown.

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TEXT-BOOKS.

PRIMERS AND READERS.

INFANT CLASS A.

*Urdu*—Asan Urdu Primer I, by Daya Shankar Dube, and Zamin Ali, published by the Indian Press, Ltd., Allahabad, (1 anna and 6 pies.)

or

Bachchon ki Pahli Kitab, by Khan Bahadur Idris Ahmad and Adhyapak Ram Ratan, published by Hindustani Book Dépôt, Lucknow. (Finish paper, 2 annas 6 pies; Pictures on art paper, 3 annas; Cheaper edition, 1 anna 6 pies.)

or

Urdu Primer, Part I, by Ram Shankar Shukul "Rasal", and Ajaz Husain, published by Lala Ram Narain Lal, Katra, Allahabad. (1 anna and 6 pies.)

*Hindi*.—Bal Bodh Primer II, by Daya Shankar Dube, published by the Indian Press, Ltd., Allahabad (1 anna and 6 pies.)

or

Pahli Bal Pothi, by Sahitya Ratan Ajodhya Singh Upadhyaya and Adhyapak Ram Ratan, published by Hindustani Book Dépôt, Lucknow. (Finish paper, 2 annas 6 pies; Pictures on art paper, 3 annas; Cheaper edition, 1 anna 6 pies.)

or

Bal Shiksha Primer, by Krishna Kant Malaviya, published by Sri Raj Narain Suri, Chowk Ganga Das, Allahabad. (1 anna and 6 pies.)

or

Bal Vikas Primer I, by Ram Shankar Shukul "Rasal," and Ajaz Husain, published by Lala Ram Narain Lal, Katra, Allahabad. (1 anna and 6 pies.)

#### INFANT CLASS B.

Urdu.—Asan Urdu Primer II, by Daya Shankar Dube and Zamin Ali, published by the Indian Press, Ltd., Allahabad. (1 anna and 6 pies.)

or

Bachchon ki Dusri Kitab, by Khan Bahadur Idris Ahmad and Adhyapak Ram Ratan, published by the Hindustani Book Depot, Lucknow. (Superior edition, 2 annas; Cheaper edition, 1 anna 6 pies.)

or

Urdu Primer, Part II, by Ram Shankar Shukul "Rasal," and Ajaz Husain, published by Lala Ram Narain Lal, Katra, Allahabad. (1 anna and 6 pies.)

*Hindi*.—Bal Bodh Primer II, by Daya Shankar Dube, published by the Indian Press, Ltd., Allahabad (1 anna and 6 pies.)

or

Dusri Bal Pothi, by Sahitya Ratna Ayodhya Singh Upadhyaya and Adhyapak Ram Ratan, published by Hindustani Book Dépôt, Lucknow. (Superior edition, 2 annas 9 pies; Cheaper edition, 1 anna 6 pies.)

or

Bal Shiksha, Part I, by Krishna Kant Malaviya and Asghar Husain "Asghar", published by Sri Raj Narain Suri, Chowk Ganga Das, Allahabad. (1 anna and 6 pies.)

or

Bal Vikas Primer II, by Ram Shankar Shukul "Rasal", and Ajaz Husain, published by Lala Ram Narain Lal, Katra, Allahabad. (1 anna and 6 pies.)

#### LOWER PRIMARY SECTION.

##### CLASS I.

*Urdu*.—First half of Lower Primary Girls' Reader, by M. B. Hill, Indian Press, Allahabad (8 annas); or Bal Chandrika in Urdu, Pahlí Kiran, by Vinapani, published by the Hindi Press, Allahabad, 1928 edition (inferior quality of paper 3 annas, superior quality of paper 3 annas 6 pies); or Lower Primary Reader for Girls, Part I, published by the Newal Kishore Press, Lucknow, (3 annas 9 pies).

*Hindi*.—First half of Lower Primary Girls' Reader, by M. B. Hill, Indian Press, Allahabad (8 annas); or Bal Chandrika in Hindi, Dusri Kiran, by Vinapani, published by the Hindi Press, Allahabad, 1928 edition (inferior quality of paper, 3 annas), (superior quality of paper, 3 annas 6 pies); or Lower Primary Reader for Girls, Part I, published by the Newal Kishore Press, Lucknow, (3 annas 6 pies).

##### CLASS II.

*Urdu*.—Second half of Lower Primary Girls' Reader, by M. B. Hill, Indian Press, Allahabad (8 annas); or Bal Chandrika in Urdu, Dusri Kiran, by Vinapani, published by the Hindi Press, Allahabad, 1928 edition (inferior quality of paper, 4 annas), (superior quality of paper, 4 annas 6 pies); or Lower Primary Reader for Girls, Part II, published by the Newal Kishore Press, Lucknow, (4 annas 6 pies).

*Hindi*.—Second half of Lower Primary Girls' Reader, by M. B. Hill, Indian Press, Allahabad (8 annas); or Bal Chandrika in Hindi, Dusri Kiran, by Vinapani, published by the Hindi Press, Allahabad, 1928 edition (inferior quality of paper, 4 annas), (superior quality of paper, 4 annas 6 pies); or Lower Primary Reader for Girls, Part II, published by the Newal Kishore Press, Lucknow, (4 annas).

## UPPER PRIMARY SECTION.

## CLASS III.

*Urdu*.—First half of Upper Primary Girls' Reader, by M. B. Hill, Indian Press, Allahabad (9 annas); or Bal Chandrika in Urdu, Tisri Kiran, by Vinapani, published by the Hindi Press, Allahabad, 1928 edition (inferior quality of paper 5 annas), (superior quality of paper, 5 annas 6 pies); or Upper Primary Reader for Girls for Class III, published by the Newal Kishore Press, Lucknow, (4 annas 9 pies).

*Hindi*.—First half of Upper Primary Girls' Reader, by M. B. Hill, Indian Press, Allahabad (9 annas); or Bal Chandrika in Hindi, Tisri Kiran, by Vinapani, published by the Hindi Press, Allahabad, 1928 edition (inferior quality of paper, 5 annas), (superior quality of paper, 5 annas 6 pies); or Upper Primary Reader for Girls for Class III, published by the Newal Kishore Press, Lucknow, (4 annas 6 pies).

## CLASS IV.

*Urdu*.—Second half of Upper Primary Girls' Reader, by M. B. Hill, Indian Press, Allahabad (9 annas); or Bal Chandrika in Urdu, Chauthi Kiran, by Vinapani, published by the Hindi Press, Allahabad, 1928 edition (inferior quality of paper, 5 annas), (superior quality of paper 5 annas 6 pies); or Upper Primary Reader for Girls for Class IV, published by the Newal Kishore Press, Lucknow, (4 annas 6 pies).

*Hindi*.—Second half of Upper Primary Girls' Reader, by M. B. Hill, Indian Press, Allahabad (9 annas); or Bal Chandrika in Hindi, Chauthi Kiran, by Vinapani, published by the Hindi Press, Allahabad, 1928 edition (inferior quality of paper, 5 annas), (superior quality of paper, 5 annas 6 pies); or Upper Primary Reader for Girls for Class IV, published by the Newal Kishore Press, Lucknow, (4 annas 3 pies).

## RECITATION.

## Classes I and II.

*Urdu*.—Chaman-i-Nazm, by Abul Hasan Haidari, published by the Bhargava Book Agency, Allahabad (1 anna 6 pies); or Hindustani Naghme, by Muhammad Idris Ahmad, published by the Hindustani Book Dépôt, Lucknow (1 anna).

*Hindi*.—Bal Kabitawali\* (revised edition) by Sri Narain Chaturvedi, published by the School Book and Apparatus Dépôt, 406, Fatehganj, Lucknow (1 anna 6 pies); or Achche Achche Git, by Ayodhya Singh Upadhyaya, Professor, Hindu University. Benares (1 anna).

\*FOR USE IN CLASS I ONLY.

## PATRIOTIC POEMS.

The following books containing patriotic poems are recommended for class use in schools :—

## Classes I—IV.

*Hindi*.—Swadesh Gan, Parts I and II (on cream wove) for classes I and II and III and IV respectively, published by the Bhargava School Book Dépôt, Lucknow (6 pies each); or Swadesh Gan, Parts I and II (on white printing) for classes I and II and III and IV respectively, published by the Bhargava School Book Dépôt, Lucknow (5 pies each); or Bharat Gan, Parts, I and II (coloured cover without illustrations) for classes I and II and III and IV respectively, published by the Standard Press, Allahabad (9 pies each); or Swadesh Sangit, Parts I and II (with cover on art paper with notes and illustrations) for classes I and II and III and IV respectively, published by the Indian Press, Allahabad (Part I, one anna 3 pies, Part II, 1 anna 6 pies); or Swadesh Sangit, Parts I and II (with 60 lb. cover and without illustration and notes) for classes I and II and III and IV respectively, published by the Indian Press, Allahabad (9 pies each); or Swadesh Prem, Parts I and II (illustrated) for classes I and II and III and IV respectively, published by Ram Dayal Agarwala, Allahabad (9 pies each); or Swadesh Prem, Parts I and II (unillustrated) for classes I and II and III and IV respectively, published by Ram Dayal Agarwala, Allahabad (6 pies each); or Hindustani Bachchon ke Gane, Parts I and II (with illustrations on ivory finish paper and cover in one colour) for classes I and II and III and IV respectively, published by the Hindustani Book Dépôt, Lucknow (Part I—9 pies, Part II—1 anna); or Hindustani Bachchon ke Gane, Parts I and II (with illustrations on art paper and coloured border on each page and two coloured title) for classes I and II and III and IV respectively, published by the Hindustani Book Dépôt, Lucknow (Part I—one anna, Part II—1 anna 3 pies); or Desh ke Git, Parts I and II for classes I and II and III and IV respectively, published by the Shishu Press, Allahabad (Parts I and II—6 pies each); or Swadeshi Gan, Parts I and II for classes I and II and III and IV respectively, published by the Saraswati Publishing House, Agra (Part I—9 pies, Part II—one anna); or Swadesh Gitawali, Parts I and II for classes I and II and III and IV respectively, published by the Newal Kishore Press, Lucknow (Part I—9 pies, Part II—1 anna); or Hindustani Git, Parts I and II for classes I and II and III and IV respectively, published by the School Book and Apparatus Dépôt, Lucknow (Part I—6 pies, Part II—9 pies); or Patriotic Poems in Hindi, Parts I and II for classes I and II and III and IV respectively, published by P. C. Dwadesh Shreni & Co., Aligarh (Part I—3 pies, Part II—4 pies); or Desh Bandana, Parts I and II for classes I and II and III and IV respectively, published by Agarwal Brothers & Co., Allahabad (Parts I and II—4½ pies each); or Rashtri

Gan, Parts I and II (cheap edition) for classes I and II and III and IV respectively, published by Gautama Brothers & Co., Cawnpore (Part I—6 pies, Part II—9 pies); or Rashtri Gan, Parts I and II (picture edition) for classes I and II and III and IV respectively, published by Gautama Brothers & Co., Cawnpore (Part I—9 pies, Part II—one anna).

*Urdu.*—Watan ki Yad. Parts I and II for classes I and II and III and IV respectively, published by the Newal Kishore Press, Lucknow (Part I—9 pies, Part II—1 anna); or Patriotic Poems, Parts I and II for classes I and II and III and IV respectively, published by Lala Ram Narain Lal, Allahabad (Part I—6 pies, Part II—9 pies); or Watan ke Rag, Parts I and II (illustrated) for classes I and II and III and IV respectively, published by the Indian Press, Allahabad (Part I—1 anna 3 pies, Part II—1 anna 6 pies); or Watan ke Rag, Parts I and II (unillustrated) for classes I and II and III and IV respectively, published by the Indian Press, Allahabad (Parts I and II—9 pies each); or Watan ke Git, Parts I and II for classes I and II and III and IV respectively, published by the Saraswati Publishing House, Agra (Parts I and II—9 pies each); or Tarana-i-Watan, Parts I and II (coloured cover without illustrations) for classes I and II and III and IV respectively, published by the Standard Press, Allahabad (Part I—6 pies, Part II—9 pies); or Patriotic Poems in Urdu, Parts I and II for classes I and II and III and IV respectively, published by P. C. Dwadesh Shreni & Co., Aligarh (Part I—4 pies, Part II—5 pies); or Hubb-i-Watan in Urdu, Parts I and II (illustrated) for classes I and II and III and IV respectively, published by Ram Dayal Agarwala, Allahabad (9 pies each); or Hubb-i-Watan in Urdu, Parts I and II (unillustrated) for classes I and II and III and IV respectively, published by Ram Dayal Agarwala, Allahabad (6 pies each); or Watan ke Git, Parts I and II for classes I and II and III and IV respectively, published by the Shishu Press, Allahabad (Parts I and II—6 pies each); or Sarod-i-Watan, Parts I and II (cheap edition) for classes I and II and III and IV respectively, published by Gautama Brothers & Co., Cawnpore (Part I—6 pies, Part II—9 pies); or Sarod-i-Watan, Parts I and II (picture edition) for classes I and II and III and IV respectively, published by Gautama Brothers & Co., Cawnpore (Part I—9 pies, Part II—1 anna); or Watan ka Tarana, Parts I and II for classes I and II and III and IV respectively, published by the Bhargava Book Agency, Allahabad (Parts I and II—6 pies each).

#### COPY-BOOKS.

*Urdu.*—Urdu Khushkhati ka Naya Silsila (Urdu Copy-books), nos. I to IV (1918), published by Munshi Gulab Singh & Sons, Lahore (price Re. 0-1-7, 0-1-7, 0-2-3 and 0-2-3); or Urdu Copy Mashq, nos. 1 to 4, by M. H. S. Jalal-ud-din Ahmad Jafri, Anwar Ahmadi Press.

Allahabad (price Re. 0-2-0, 0-1-6, 0-1-3 and 0-1-3); or Urdu model copy-slips nos. I to III, published by the School Book and Apparatus Dépôt, 406, Fatehganj, Lucknow, 2nd edition (price Re. 0-1-0, 0-1-0 and 0-1-3); or Newal Kishore Urdu Copy Book, nos. 1 to 4 (revised, improved and enlarged edition) published by the Newal Kishore Press, Lucknow (1 anna 9 pies each); or Urdu Khushkhati ka Naya Silsila, nos. 1 to 4, published by the Oriental Publishing House, Lucknow (price nos. 1 and 2, 1 anna 9 pies each and nos. 3 and 4, 2 annas 3 pies each); or Muallim Khush Navisi, slip nos. 3, 4, 4A, 5 and 5A, by Sita Ram and Abul Hasan Haidri, published by the Bhargava Book Agency, Johnstonganj, Allahabad (price no. 3, 1 anna and nos. 4, 4A, 5 and 5A, 9 pies each) [slip no. 3 for class I, slip nos. 4 and 4A for class II and slip nos. 5 and 5A for classes III and IV].

*Hindi*.—Hindi Model copy-slips nos. I to III, published by the School Book and Apparatus Dépôt, 406, Fatehganj, Lucknow, 1925 edition (price Re. 0-1-0, 0-1-0 and 0-1-3); or Model copy-slip no. I(A), in Hindi, for Class I, published by the School Book and Apparatus Dépôt, 406, Fatehganj, Lucknow, 1925 edition (1 anna); or Lipibodh Hindi copy-slip nos. 1 to 3 by C. L. Malviya, 1st edition, published by Bhargava School Book Dépôt, 15-16, Aminabad Park, Lucknow (1 anna 3 pies each); or Sulekh Shikshak, Part 5A,† by Sita Ram and Ram Sundar Tripathi, published by the Bhargava Book Agency, Allahabad (9 pies); or Hindi ki Pahli, Dusri and Tisri† copy-slips, by Madan Mohan, published by the Hindustani Book Dépôt, Lucknow (price Re. 0-1-0, 0-1-0 and 0-1-3).

†FOR CLASSES III AND IV.

## DRAWING AND BRUSHWORK.

### AIMS AND METHOD IN TEACHING DRAWING.

*Method*.—Teachers of drawing should bear in mind that it is far more important to train the eye and develop the suppleness of the hand than to produce mechanically accurate copies of drawings. They should therefore see that pencils of suitable length are used and kept properly pointed. They should forbid the shifting and turning of the paper in the process of drawing and insist on the adaptation of the hand to the lines required. They must accept responsibility for seeing that scholars do a satisfactory amount of work, and while on the one hand hasty and untidy work is to be checked, on the other hand anything of a laboriously minute and mechanical nature is to be avoided.

In free-hand drawing no mechanical aids should be allowed.

## SYLLABUS OF THE COURSES IN DRAWING.

### PREPARATORY SECTION.

#### INFANT CLASS A.

Drawing of straight lines, squares, and oblongs.

#### INFANT CLASS B.

Drawing of curved lines, circles and figures like circles, bounded by curved lines (on slate). Drawing to be taught on the blackboard; no books to be prescribed.

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### LOWER PRIMARY SECTION.

#### CLASS I.

As in Macmillan's Official Drawing Book no. 1 (6 annas); or as in Nelson's Graduated Drawing Book no. 1; or as in Indian Drawing Books for Vernacular Schools, Book I (4 annas); or as in Banbery's Scholars' Drawing Book no. 1, in Urdu or Hindi (6 annas); or as in Indian Drawing Copy-slips for Vernacular Schools, no. 3, published by the School Book and Apparatus Dépôt, Lucknow (2 annas) (slates to be used during the first half-year then paper).

#### CLASS II.

As in Macmillan's Official Drawing Book no. 2 (6 annas); or as in Nelson's Graduated Drawing Book no. 2; or as in Indian Drawing Books for Vernacular Schools, Book II (4 annas); or as in Banbery's Scholars' Drawing Book no. 2, in Urdu or Hindi (6 annas); or as in Indian Drawing Copy-slips for Vernacular Schools, no. 4, published by the School Book and Apparatus Dépôt, Lucknow (2 annas).

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### UPPER PRIMARY SECTION.

#### CLASS III.

As in Macmillan's Official Drawing Book no. 3 (6 annas); or as in Nelson's Graduated Drawing Book no. 3; or as in Banbery's Scholars' Drawing Book no. 3 (6 annas); or as in Indian Drawing Book no. 3, revised edition, published by the Indian Press, Allahabad (4 annas); or as in Modern Drawing Series, Book no. 1, by R. C. Shinghal, 1st edition, published by Gupta Bros. & Co., Khurja (6 annas).

#### CLASS IV.

As in Macmillan's Official Drawing Book no. 4 (6 annas); or as in Nelson's Graduated Drawing Book no. 4; or as in Banbery's Scholars' Drawing Book no. 4 (6 annas); or as in Indian Drawing Book no. 4,

revised edition, published by the Indian Press, Allahabad (4 annas); or as in Modern Drawing Series, Book no. 1, by R. C. Shinghal, 1st edition, published by Gupta Bros. & Co., Khurja (6 annas).

N.B.—Teachers of limited experience in the teaching of Drawing are recommended to use "Longman's Complete Drawing Course, Part I," by I. H. Morris (Longmans, Green & Co.) (6s.) Teachers of Drawing in schools where Banbery's Scholars' Drawing Books are used are recommended to use "Teachers' Drawing Manual" in English, Urdu or Hindi by H. Banbery (Indian Press, Allahabad) (Rs. 2, each.)

Books recommended for the use of drawing masters :—

Imaginative Drawing, volume II, by E. A. Branch, published by Evans Bros., London.

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## SYLLABUS OF THE COURSES IN BRUSHWORK.

### PREPARATORY SECTION.

#### INFANT CLASS A.

Free-arm drawing on the blackboard or on slates, of straight lines, squares, and oblongs with coloured chalk—the squares and oblongs being filled up with a mass of colour on the same system as the brushwork.

#### INFANT CLASS B.

Free-arm drawing as in the infant class A, and free-arm drawing on the blackboard or on slates of curved lines, circles, and figures like circles, bounded by curved lines with coloured chalk—all figures being filled up with a mass of colour on the same system as the brushwork.

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### LOWER PRIMARY SECTION.

#### CLASS I.

Some of the elements and their combination in brushwork which compose simple flowers and leaves, those known technically as blobs, lines, and spots.

#### CLASS II.

Further brushwork forms, lily-leaves, and thick curves.

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### UPPER PRIMARY SECTION.

#### CLASS III.

Petals and right and left petal curves, with combination of all the past work.

#### CLASS IV.

Various combination of past forms, making leaves, etc., and well-known flowers.

BOOKS FOR TEACHERS' USE.

The following are recommended for teachers' use :—

Longmans' Charts of Colour, Drawing and Design in three series, by Cecil L. Burns, Principal, School of Art, Bombay, together with a Teachers' Handbook explaining the charts. Rs. 18.

*Elementary series.*—Ten sheets containing alternate lessons in colour and geometrical drawing.

*Intermediate series.*—Ten coloured copies of leaf-forms with a sheet of geometrical problems and exercises showing their connexion with geometrical patterns.

The Book of School Colour Work, volumes I and II, by E. A. Branch, published by Evans Bros., London.

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HYGIENE.

The following instructions on the teaching of hygiene in the preparatory and primary classes should be carefully observed by teachers :—

It is the duty of the teacher to train her pupils in habits of cleanliness and order. She should therefore see that they are clean and neat when they come to class, and should require them to keep their books tidy and clean and to help her in keeping the class-room orderly. Formal lessons on hygiene should not be given till class III, but the teachers should endeavour by example and precept to impress on the children's minds simple rules on the following matters :—

Cleanliness of the person, clothes, house, food, milk and water.

Need of fresh air.

Dangers from spitting.

Disposal of refuse.

Protection against flies and mosquitoes (for Upper Primary only).

Food and eating (e.g., eat slowly, eat at regular intervals, avoid excess of spices).

Importance of rest and sleep.

Care of the eyes and ears.

**Outline Syllabus for lessons on Hygiene in Classes III and IV.**

CLASS III.

*Cleanliness of the body.*

*Lesson 1.*—Necessity of cleanliness for our own sake and for others; danger of uncleanness to cuts and sores, objectionable smell from dirty children; dangers of handling food with dirty hands.

*Lesson 2.*—Care and appearance of the hair, need for frequent washing—the danger of nits. Care of nails—to be kept short and clean; not be bitten.

*Lesson 3.*—Washing and how to wash properly; use of soap; warm water best for cleansing purposes; cold for tonic; face, neck and hands need most washing; whole body should be washed once daily.

*Lesson 4.*—Need for cleanliness of body inside as well as out; bowels should be moved at least once a day at a regular time, preferably in the morning. Lack of regularity an important reason for constipation; drink a glass of water before retiring for the night.

#### *Clothing.*

*Lesson 5.*—Need for change of clothing ones a week; no clothing worn during the day should be worn also at night. Importance of tidiness.

#### *Fresh air and sunlight.*

*Lesson 6.*—The value of fresh air and sunlight; necessity of fresh air for lungs. Best air is out of doors.

#### *Breathing.*

*Lesson 7.*—Children should be taught how to breathe properly. Deep breathing is best and comes naturally when children run about; breathe through the nose. Nose to be kept clean. How to clean nose? Danger of mouth breathing; function of nose to warm and filter air.

#### *Sleep. Importance of rest.*

*Lesson 8.*—Importance of rest and sleep. Early to bed; how many hours' sleep are the children getting? Should have about 12.

Advantages of well-aired room, open window; important to have through current of air.

*Lesson 9.*—Do children sleep with open windows in winter? Do they have a fire or lamp in the room? Do they cover up their face and head? Say how ventilation should be secured in winter.

#### *Care of the teeth.*

*Lesson 10.*—The importance of teeth, the more they are used the better for them. How to keep teeth in good condition? A lesson in cleaning the teeth showing how to use the *datoon*.

*Lesson 11.*—Articles useful for cleaning teeth. What do children generally use at home for cleaning their teeth? When to clean teeth (best before going to bed and in the morning). Injurious effects of pan on teeth. Harmful effects of picking teeth with pins, sticks.

CLASS IV.

*Wholesome food and eating habits.*

*Lesson 1.*—Adequate nutrition is the best protection against illness and ensures a better and quicker recovery from fatigue. Children should be taught the values of food such as milk, fresh fruits, green vegetables and the bad effects of spices and too many sweets.

*Lesson 2.*—*Evils of intoxicants and drugs.*—What are the chief intoxicants and drugs people use? (Wine, opium and its various derivatives, *hemp, Tari, charas*). Typical appearances of people who are addicted to various forms of intoxicants and drugs. Evil effects of each class of intoxicants and mental, physical and moral deterioration that ensues. Use of intoxicants ruinous to the peace and happiness of the family.

*Lesson 3.*—Meals should be regular in period of time; no food between regular meals, advantageous to drink water when thirsty and between meals but not much water during meals. Never drink with food in mouth; eat slowly, chew food well. Hands and faces should be washed before meals.

*Lesson 4.*—Children should not eat dirty food, the remainder of what someone else has partly eaten or share glass or cup with other children; point out the danger of transmission of disease by this. Name diseases that may be transmitted.

*Care of eyes and ears.*

*Lesson 5.*—Children should at once tell their teacher if they are unable properly to see words in books or on the blackboard. Need for good light on all work; not to bend over work or read or sew in a bad light.

Cleaning of the eyes. Use of Boric acid.

*Lesson 6.*—Danger of putting any hard substance into ear; how to clean ear of accumulated wax?

*Common infectious diseases.*

Cause, manner of spread and protection against—

*Lesson 7.*—(i) Cholera.

*Lesson 8.*—(ii) Plague.

*Lesson 9.*—(iii) Small-pox.

*Lesson 10.*—(iv) Malaria.

*Lesson 11.*—(v) Hookworm.

*Domestic Hygiene.*

*Lesson 12.*—Proper storage of food and water in the house—manner of contamination of food and pollution of water.

*Lesson 13.*—Cleanliness of towns and villages—Importance of proper disposal of refuse and manure, and of dejecta in house.

Books recommended for the use of teachers are—

The First Laws of Health (A Health Reader for Indian Schools), by Lieut.-Colonel Megaw, Oxford University Press, Calcutta, 1921. Re. 1.

Tandurusti ki Pahli Kitab, by Colonel J. W. D. Megaw, Indian Red Cross Society, Viceregal Lodge, Delhi. (12 annas.)

Swasth Raksha ke Prathmic Niyama (Hindi version of Colonel J. W. D. Megaw's First Laws of Health), Indian Red Cross Society, Viceregal Lodge, Delhi. (12 annas.)

Sehat ki Kahani (Urdu translation of the Land of Health and the Land of Wealth), by E. Marsden, translated into Urdu, by M. Abid Hasan Faridi and published by Macmillan & Co. Re. 1.

Hindi Translation of "The Land of Health and the Land of Wealth," by Ram Narayan Misra, published by Macmillan & Co. Re. 1.

Hifzan-i-Sehat, Parts 1 and 2 in one volume in Urdu, by M. Rahmat Elahi Siddiqi, Sub-Assistant Surgeon, corrected edition, published by the Newal Kishore Press, Lucknow. Rs. 2.

Chart Rules of Health in Urdu, by B. J. Sahni, Lahore. Mounted on cloth with rollers. Rs. 2-8.

Elementary Hygiene for Beginners, by C. F. Wanhills (Blackie & Son). 14 annas.

Hindustani Gharon men Timardari in Urdu (Indian Home Nursing), by Dr. Major Muhammad Abdul Hakim, State Surgeon, Rampur State. Rs. 3.

Aroga Dig Darshan, by Mahatma Mohan Das Karam Chand Gandhi, published by Narain Dutt Sahgul & Sons, Booksellers, Lahore, 1st edition. (12 annas.)

Lower Swasth, by Sriyut Bimal, published by Narvadeshwar Pustakalaya, Babura, Shahabad, 1925 edition. (2 annas.)

Hygiene Yani Hifz-i-Sehat, Parts I to IV, by Rai Sahib Dr. Daya Nidhan, 1st edition, published by the School Book and Apparatus Dépôt, 406, Fatehganj, Lucknow (Part I—6 annas, Parts II and III—7 annas each, and Part IV—8 annas.)

Hygiene ya Swasthya Raksha ki Prarambhik Shiksha, Parts I to IV, by Rai Sahib Dr. Daya Nidhan, 1st edition, published by the School Book and Apparatus Dépôt, 406, Fatehganj, Lucknow. (Part I, 6 annas, Parts II and III—7 annas each, and Part IV—8 annas.)

## COOKING.

### CLASSES III AND IV.

Courses to be proposed for the approval of the Inspectress of Girls' Schools.

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## SEWING.

### AIMS AND METHOD IN THE TEACHING OF SEWING.

In teaching sewing the aim should be to train the pupils to do neat and careful work and to finish it well.

The younger children should be supplied with coarse soft material and with large needles; fine stitching should not be required from them, as it is injurious to their eyes.

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### SYLLABUS OF THE COURSES IN SEWING.

#### PREPARATORY SECTION.

##### INFANT CLASS A.

Threading a needle; making knots; use of thimble; tacking and running.

##### INFANT CLASS B.

Running, running double-seams; placing; twisting threads; back-stitching.

*Optional*—Spinning.

#### LOWER PRIMARY SECTION.

##### CLASS I.

Practice in running and back-stitching, top sewing, hemming.

*Optional*.—Chikan stitch, *kacheḥa phanda*; *ulti bakhya* (stem-stitch); spinning.

##### CLASS II.

Hemming, run and fell; knitting with two needles (plain); darning stitch on untorn material.

*Optional*.—Chikan stitch; *pakka phanda*; hem-stitching; crochet (chain stitch); spinning.

UPPER PRIMARY SECTION.

CLASS III.

Sewing on buttons and tapes and loops, button hole stitch, darning a hole; gathering and setting in; knitting (plain and purl); casting on and off with two needles.

*Optional.*—Chikan stitch; *sursiri*; crochet; feather-stitching, spinning.

CLASS IV.

Darning; patching, knitting on four needles (plain and purl); button holes; practice of stitches previously learnt; to cut out and make up a simple garment, e.g., *kurta* or *pinafore*.

*Optional.*—Chikan stitches; *bakhya*; *hathkati*; crochet; satin stitch; spinning.

Book recommended for the use of teachers:—

Silai Darpan or Silai ki Kitab, Part I, (Hindi and Urdu), by Srimati Laiq-un-Nisa, 1st edition, 1929, published by Rai Sahib Ram Dayal Agarwala, Bookseller and Publisher, Katra, Allahabad. (Rs. 2 each version.)

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OBJECT LESSONS.

Courses to be proposed for the approval of the Inspectress of Girls' Schools.

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CLAY MODELLING AND CALISTHENICS.

Courses to be proposed for the approval of the Inspectress of Girls' Schools.

A. H. MACKENZIE, M.A., C.I.E..

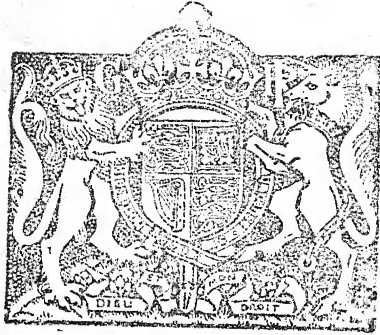
Director of Public Instruction,  
United Provinces.

ALLAHABAD :

March 19, 1932.



Register no. A388.



SUPPLEMENT  
TO THE  
**Government Gazette,**  
THE UNITED PROVINCES OF AGRA AND OUDH.

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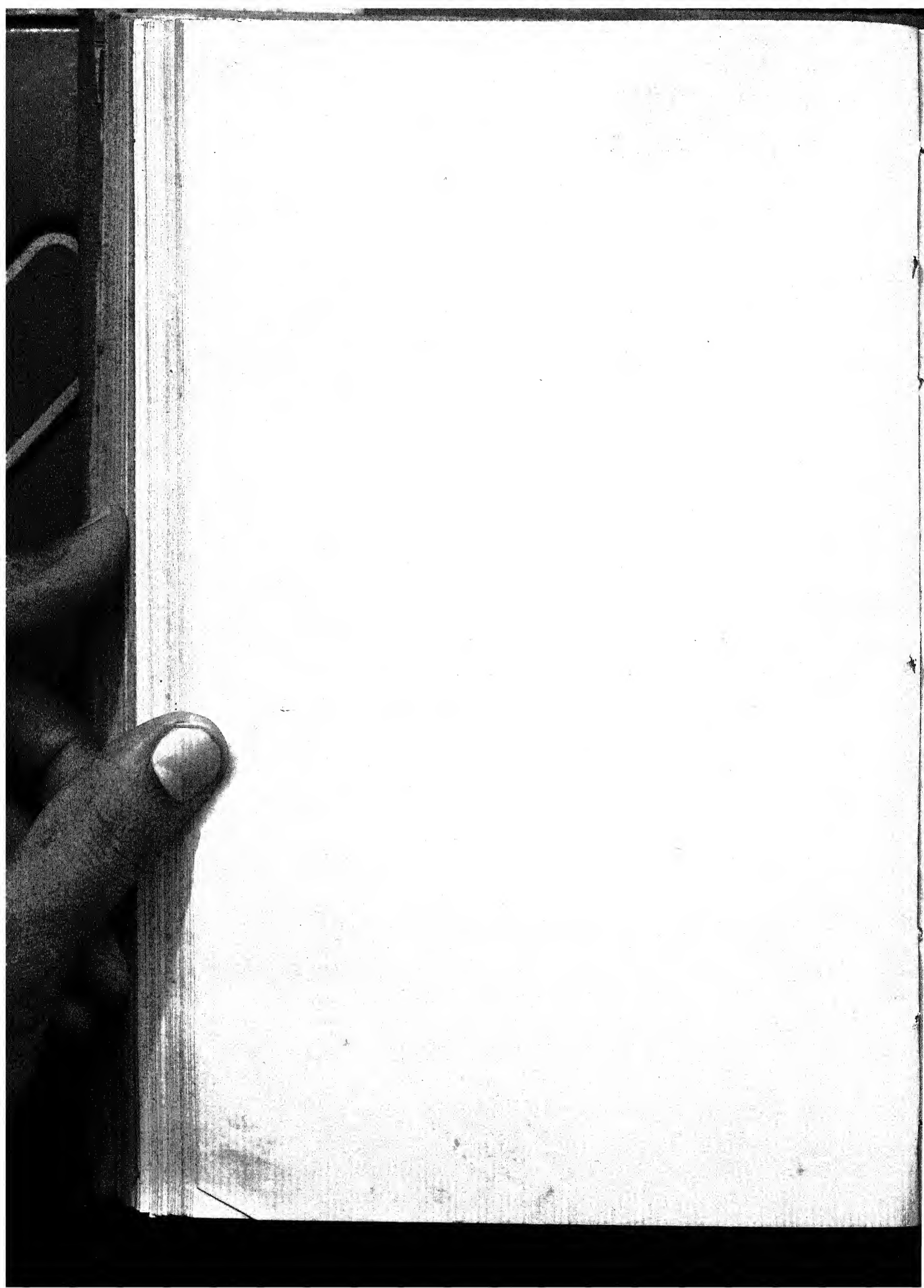
ALLAHABAD: SATURDAY, APRIL 30, 1932.

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**PART IV.**

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PROSPECTUS OF THE ARTS, SCIENCE, COMMERCE  
AND AGRICULTURE EXAMINATIONS OF THE  
BOARD OF HIGH SCHOOL AND INTERMEDIATE  
EDUCATION, UNITED PROVINCES.



EXAMINATIONS IN ARTS, SCIENCE, COMMERCE AND  
AGRICULTURE.

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CHAPTERS XII TO XV(a) OF THE BOARD'S  
REGULATIONS.

*N.B.*—These regulations are subject to amendment from time to time as the Board may determine. Notice of such amendments will be given in the *Gazette*.

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CHAPTER XII.

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EXAMINATIONS.

*General Rules.*

1. The Board shall conduct the following examinations :—
  - (a) The High School Examination.
  - (b) The Intermediate Examination.
  - (c) The Intermediate Examination in Commerce.
  - (d) The Intermediate Examination in Agriculture.
  - (e) The Diploma Examination in Indian Music at the end of the High School course.
2. The Board's examinations shall be held at such centres and on such dates and at such times as the Board may from time to time appoint.
3. The tests at the Board's examinations may be partly oral or practical and partly written. Oral and practical tests shall be carried out by examiners appointed by the Board in such manner as the Examinations' Committee may prescribe from time to time. Written tests shall be by means of question papers, and the question papers shall be given out simultaneously at every centre at which the examination is being held.

4. Every candidate for admission to an examination held by the Board shall, not later than the seventh of January each year,—

- (a) pay the fee prescribed for the examination,
- (b) state the optional subject or subjects in which he desires to present himself for examination, and
- (c) furnish the Secretary with a certificate showing—
  - (i) that he has completed a regular course of study\* in a recognized institution, or
  - (ii) that he has been permitted by the Board to appear as a private candidate,

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\* Regulation 4, Chapter XVII—

The Board shall, for the purposes of a regular course of study, prescribe the †minimum number of meetings of a class that must be held in preparation for any of its examinations.

† NOTE.—“The minimum † number of days that recognized institutions, including classes XI and XII, will be open will be 180; for other recognized institutions the minimum number will be 200.

No candidate will be presented for the High School Examination by a recognized institution unless he has been present in classes IX and X for at least 75 per cent. of the days the institution was open during two §academical years.

No candidate will be presented for the Intermediate Examination by a recognized institution unless he has attended at least 75 per cent. of the lectures and practical work (if any) given in each subject in which the candidate is to be examined at the institution during two §academical years.

In the case of failed and ¶ detained candidates the percentage will be calculated for one academical year only. The attendance put in during the last academical year should be calculated.

The head of a recognized institution may condone a deficiency of not more than six days. All cases in which this privilege is exercised will be reported to the Board.

The Board may, in very special cases, condone a deficiency of not more than 15 days.”

‡ This minimum applies to the institution as a whole and not to attendance in class X or class XII separately (*vide* paragraph 16 of the minutes of the meeting of the Board held on November 30 and December 1, 1923).

§ The two academical years need not be consecutive (*vide* resolution 20 of the meeting of the Examinations' Committee held on January 25, 1929, adopted by the Board). It is left to the discretion of the heads of institutions to take into account the attendance of any one year in the case of a candidate who has attended class IX for more than one year along with his attendance in class X (Resolution 22 of the meeting of the Examinations' Committee held on January 28, 1930, adopted by the Board, and resolution 6 of the meeting of the Examinations' Committee held on September 20, 1930, adopted by the Board).

¶ The term “detained” means detained for any cause either in class X or class XII (*vide* resolution 20 of the meeting of the Examinations' Committee held on January 25, 1929, adopted by the Board).

The attendance put in by a student at an institution outside the jurisdiction of the United Provinces Board in preparation for an examination which is recognized as equivalent to the Board's High School Examination should count along with that which he will put in at the United Provinces school to which he is subsequently admitted for purposes of completing a regular course of study for two academical years in preparation for the High School Examination (Resolution 7 of the Examinations' Committee, dated September 20, 1930, adopted by the Board).

- (iii) (for \* Science candidates of the High School Examination only) that he has actually performed the experiments laid down in the syllabus.

5. The following fees shall be paid in respect of the examinations held by the Board :—

- |   |  |
|---|--|
| (1) High School Examination                               | Rupees 15 by each candidate from a recognized institution.   |
| (2) Ditto ..  | Rupees 20 by each private candidate.   |
| (3) Intermediate Examination                              | Rupees 25 by each candidate from a recognized institution.   |
| (4) Ditto ...   | Rupees 30 by private candidates.   |
| (5) Intermediate Examination in Commerce.                 | Rupees 25 by each candidate from a recognized institution.   |
| (6) Ditto ..  | Rupees 30 by private candidates.   |
| (7) Intermediate Examination in Agriculture.              | Rupees 25 by each candidate from a recognized institution and Rs. 30 by each private candidate (if any). |
| (8) Examination in one subject only.                      | Rupees 5.  |
| (9) Examination in more than one subject.                 | Rupees 5 for each subject.   |
| (10) **Fee for checking the results of failed candidates. | Rupees 10 per candidate.   |

\* The term "Science" includes "General Science."

\*\* The following rules for the scrutiny of marks and the checking of the results of failed candidates have been made by the Board (*vide* Appendix 1 to the report of the meeting of the Examinations' Committee held on February 23, 1923, adopted by the Board) :—

1. Any candidate who has failed at an examination conducted by the Board may apply to the Secretary for the scrutiny of his marks and the re-checking of his result.

2. Such applications must be made within one month from the date of the publication of the result and must be forwarded by the head of the institution or other authority who forwarded the candidate's original application for permission to appear at the examination.

3. All such applications must be accompanied by a copy of the treasury chalan showing that the prescribed fee of Rs. 10 has been paid. In the case of candidates belonging to Indian States this fee must be sent in cash to the office of the Secretary.

4. A candidate shall not be entitled to a refund of the fee unless as a result of the scrutiny he is declared successful in the examination.

5. If on scrutiny and re-checking a failed candidate is found to have passed, his name shall be at once published in the Gazette in a supplementary list. In all other cases the result of the scrutiny shall be communicated to the candidate through the head of the institution or other forwarding authority as soon as possible.

6. The work of scrutiny does not include re-examination of the answer-books of a failed candidate. It consists of re-checking the marks entered in the answer-books with a view to seeing whether there has been any mistake in totalling the marks assigned to individual questions or in the form of omitting the marks assigned to any question [*vide* resolution 16 of the meeting of the Examinations' Committee held on November 8, 1928 and resolution 31(c) of the meeting of the Board held on November 9, 1928].

(11) \*Fee for communicating the Rupees 2 per candidate.  
total marks in each sub-  
ject obtained by a candi-  
date at an examination.

(12) Diploma Examination in Rupees 10 by each candidate  
Indian Music. from a recognized institution  
and Rs. 15 by each private  
candidate.

†Provided that women candidates may pay fees for the High School  
or the Intermediate Examination at half the rates prescribed.

6. A candidate who fails to pass or who from sickness or other  
sufficient cause is unable to present himself for any examination, shall  
not receive a refund of his fee :

provided the Board may, on application, admit a candidate who was  
unable to present himself for any examination to the next ensuing  
examination without payment of a further fee :

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\* The following rules for the communication of marks have been approved by the Board  
(vide paragraph 6 of the report of the meeting of the Examinations' Committee held on  
February 10, 1927, adopted by the Board) :—

(1) Only the total marks in each subject obtained by a candidate at an examination  
will be communicated.

(2) Any candidate desiring to know the total marks in each subject obtained by him  
at an examination held by the Board shall send an application to the  
Secretary through the officer who forwarded his application for admission  
to the examination, not later than six months ordinarily after the publica-  
tion of the results in the *United Provinces Government Gazette*.

(3) All such applications must be accompanied by a copy of the treasury chalan  
showing that the prescribed fee of Rs. 2 has been paid. In the case of candi-  
dates belonging to Indian States this fee must be sent by money order to the  
Secretary.

N.B.—Fees sent by money order by candidates residing in the United Provinces  
will not be accepted.

(4) No refund of the fee shall be allowed.

(5) Each application should furnish necessary information on each of the following  
particulars :—

(a) The name and year of the examination.

(b) The name of the candidate.

(c) His roll number.

(d) The name of his college, or the district of which he was a resident.

(e) The name of his examination centre.

(f) The subjects offered.

† The proviso applies to the fees prescribed for all the examinations that are  
mentioned in the regulation, but *not* to the fees prescribed for checking the results of  
failed candidates or for communicating the total marks in each subject obtained by a  
candidate at an examination (*vide* resolution 5 of the Examinations' Committee, dated  
January 12, 1931, adopted by the Board).

provided also that the fee may not be held over for the next ensuing examination in the case of a candidate who absented himself from a part of the examination.

7. The Secretary shall, after satisfying himself that a candidate has complied with all the requirements for admission to an examination of the Board, furnish the candidate with a card of admission, on presentation of which to the local superintendent of the examination, the candidate shall be permitted to sit for the examination.

8. Notwithstanding anything contained in these Regulations, no candidate who is still undergoing rustication or who has been expelled within the academical year preceding the date of his application for permission to appear at an examination shall be admitted to any examination of the Board.

9. The Secretary, if satisfied that a candidate's admission card has been lost or destroyed, may grant a duplicate card on payment of a further fee of Rs. 2.

10. Private candidates\* shall be eligible to appear at the Board's examinations on the conditions hereinafter laid down.

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\* The following rules for the admission of private candidates to the Board's examinations have been approved by the Board (*vide* Board's resolution no. 22, dated November 8, 1924):—

1. Permission to appear as private candidates will be given to candidates who have appeared at a previous High School or Intermediate Examination and have failed or to whom permission to appear as private candidates has been given by the Board on a previous occasion.

2. Permission to appear as private candidates at the next ensuing High School or Intermediate Examination will not be granted to candidates who have failed to obtain promotion to the highest class of any High School or Intermediate College (i.e., to those who have been detained in class IX or class XI).

3. (a) Private candidates may change their subjects of examination from those previously offered by them, if more than one year has elapsed since their last appearance at the examination; they will not be required to give any reasons for the change.

(b) Private candidates who appeared and failed at an examination immediately prior to the submission of their application and desire to offer for the next examination subjects other than those previously offered must give an adequate explanation of the change and show that they can satisfactorily complete the course of study in the new subjects.

4. Candidates residing outside the present territorial jurisdiction of the Board may be permitted to appear at the Board's examinations as private candidates, provided they submit an adequate explanation as to why they prefer to take the United Provinces Board's examination.

5. Where an age-limit or other restriction is imposed by the local University or Examining Body, such restriction shall be rigorously enforced before permission to appear as private candidates at the Board's examinations is granted to outside candidates.

11. A candidate who desires to offer himself for examination as a private candidate shall, not later than the first of October preceding the date fixed for the next ensuing examination, send in an application to the Secretary, through the Inspector of Schools of his division or the Chief Educational Officer of the Indian State where he resides, unless he is a failed candidate of a previous year, in which case the application may be forwarded by the head of the institution at which he last studied. In the case of a female candidate the application may be forwarded by the head of any institution recognized by the Board. The application should be made in the prescribed form and should set forth :—

(a) his age at the time of the application ;

(b) the conditions under which he has been studying and is proposing to continue his studies ;

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6. Residents of places beyond the territorial jurisdiction of the Board who have appeared and failed at an examination conducted by the Board or its predecessors may be allowed to appear as private candidates at a subsequent corresponding examination, notwithstanding anything contained in rules 4 and 5 foregoing. Rules 4 and 5 will, however, apply to residents of such places who have passed any examination conducted by the Board or its predecessors and desire to appear for the first time at a higher examination conducted by the Board.

7. Private candidates shall not be allowed to offer for their examination any subject even if the subject is recognized for the examination which is not being taught in a recognized institution or in which no institution is recognized [*vide* Board's resolution no. 34(b), dated November 6 and 7, 1925].

8. Private candidates who have passed the Cambridge School Certificate Examination and intend to appear at the Intermediate Examination should specify in the application form the standard of attainment in each of the subjects in which they have passed the Cambridge School Certificate Examination as shown in the detailed result of the examination (*vide* Private Candidates Committee's Resolution no. 7, dated October 3, 1925).

9. Permission to appear as private candidates at the High School Examination shall not be given to candidates who have passed the Vernacular Final Examination until three academical years have elapsed since the date of their passing the Vernacular Final Examination nor shall any students who have left school at a stage earlier than the High School stage be permitted to appear at the High School Examination as private candidates in a year earlier than that in which they would have appeared if they had continued their studies at a recognized institution up to the High School Examination. It should be stated in the application form of Vernacular Final Certificated candidates whether English was offered as a subject in the Vernacular Final Examination (*vide* Resolution 4 of the meeting of the Private Candidates Committee held on October 17—20 and November 1, 1928, Resolution 33 of the meeting of the Board held on November 9, 1928, paragraph 4 of the report of the meeting of the Private Candidates Committee held on October 23, 25 and 26, 1929, and Resolution 31 of the meeting of the Board held on November 7, 1929).

10. All applications from intending private candidates should reach the office of the forwarding officer not later than September 24 preceding the date fixed for the next ensuing examination (*vide* Resolution 5 of the meeting of the Private Candidates Committee held on October 17—20 and November 1, 1928 and Resolution 33 of the meeting of the Board held on November 9, 1928).

- (c)\*the optional subject or subjects which he offers, provided that no practical work or practical examination is prescribed for the subject or subjects so offered.

He should also forward the original copy of the scholar's register granted to him by the institution, if any, at which he last studied.

12. Such applications from intending private candidates shall be referred to the Sub-Committee appointed under Regulation 2, Chapter VI to scrutinize applications from private candidates.

13. Such applications, after being scrutinized by the Sub-Committee, shall either be granted or rejected by it.

14. Notwithstanding the definition of "Private candidate" contained in clause (10), Chapter I, any woman candidate, who is not studying at a recognized institution, may be admitted by the Sub-Committee referred to in Regulation 12 above as a private candidate to any of the Board's examinations, provided she fulfils the other conditions governing the admission of private candidates to the examinations conducted by the Board.

14(a). Notwithstanding anything contained in these Regulations, a student who has passed the High School or an equivalent Examination and is studying in an Intermediate class of a college recognized by the Board may be permitted to appear as a private candidate at the High School Examination of the Board in a single subject not involving practical work or a practical examination, and similar permission may be

\* The following subjects prescribed for the Board's examinations should be deemed subjects which involve practical work or a practical examination for purposes of this regulation and regulations 14(a) and 17 :—

#### High School Examination.

- |   |   |
|---|---|
| (1) Physics and Chemistry (except for such private candidates as are referred to in the last proviso to regulation 17). | (4) Metal Work.   |
| (2) Agriculture.  | (5) General Science (except for such private candidates as are referred to in the last proviso to regulation 17). |
| (3) Manual Training.  |   |

#### Intermediate Examination.

- |   |   |
|---|---|
| (1) Chemistry (except for such private candidates as are referred to in the last proviso to regulation 17). | (3) Biology (except for such private candidates as are referred to in the last proviso to regulation 17).                         |
| (2) Physics (except for such private candidates as are referred to in the last proviso to regulation 17).   | (4) Economics (except for women candidates and such private candidates as are referred to in the third proviso to regulation 17). |

#### Intermediate Examination in Commerce.

*Nil.*

#### Intermediate Examination in Agriculture.

All subjects *except* English.

given to a student who has passed the Intermediate Examination and is studying for a higher examination to go up for the High School or the Intermediate Examination in a single subject not involving practical work or a practical examination.

14(b). Notwithstanding anything contained in these Regulations, no male married\* candidates, except those who are married before July 1, 1929 or who are at the time of marriage not less than eighteen years of age, shall be admitted from any institution recognized by the Board to the High School Examination after the examination of 1930. Such candidates may apply for permission to appear as private candidates only at the High School Examination with effect from the examination of 1931.

15. Except when otherwise provided in these Regulations, the names of candidates who have passed an examination of the Board shall be placed in three divisions, and further, the names of students from recognized institutions shall be grouped according to the institutions in which they have studied.

16. A candidate who has failed in an examination may present himself for one or more subsequent examinations, provided that he shall on each and every such occasion satisfy the Secretary that he has fulfilled the conditions laid down in the Regulations for the admission of candidates to the Board's examinations.

17. A candidate who has failed in an examination may be admitted to a subsequent examination without attending a regular course of study in a recognized institution, provided—

(a) that he has not pursued his studies at an educational institution of any kind ;

(b) that, not later than the first of October preceding the date fixed for the next ensuing examination, he sends an application to the Secretary through and recommended by the head of the institution at which he last studied, in the prescribed form, setting out—

(i) the conditions under which he has been studying and is now proposing to continue his studies ;

(ii) the dates of his failing in the examination :

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\*"Marriage" within the meaning of this regulation means what in Hindustani is called *Shadi*, *Biyah* or *Nikah* and not *Gauna* or *Rukhsat*.

provided, further, that this \*Regulation shall not apply to candidates who have taken a subject or subjects for which practical work or a practical examination is prescribed :

provided that private candidates may be allowed to take Economics as one of their optional subjects if they have studied the subject as regular students at a recognized institution and failed at the Intermediate Examination of a previous year :

provided, lastly, that private candidates may be allowed to take Science or General Science as an optional subject for the High School Examination or one or more of the Science subjects Chemistry, Physics and Biology as optional subjects for the Intermediate Examination on the following conditions :—

- (a) that they have studied the subject or subjects as regular students at a recognized institution and failed at the examination of a previous year ;
- (b) that they produce a certificate showing that they have done in the laboratory of a recognized institution the practical work prescribed in the subject or subjects in the Prospectus during the year preceding the examination at which they intend to re-appear, notwithstanding clause (a) of the first proviso foregoing ;
- (c) that they had passed in the Science subject or subjects at their last appearance for the examination.

18. † Any candidate who has obtained 40 per cent. of the aggregate number of marks, but has failed in one subject only, obtaining not less than 25 per cent. in that subject, shall be admitted to a subsequent

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\* See the footnote to Regulation 11, Chapter XII.

† Compartmental candidates have the option of appearing at the examination as private candidates, provided they have not pursued their studies at an educational institution of any kind during the session preceding the examination at which they intend to appear and subject to the restrictions laid down in the provisos to Regulation 17, Chapter XII.

Compartmental candidates are not eligible for admission to class XI of a recognized Intermediate College unless and until they have passed *completely* the High School Examination under Regulation 2, Chapter XIII (*vide* Examinations' Committee's Resolution no. 9, dated February 6, 1925, adopted by the Board and Examinations' Committee's Resolution no. 9, dated November 5, 1930, adopted by the Board).

The prescribed fee for admission to the compartmental examination is Rs. 5.

Failed candidates may have two chances of re-appearing at the compartmental examination in two consecutive years immediately following the year in which they appeared at the examination taking all the subjects and were declared eligible for the compartmental examination (*vide* Board's Resolution no. 28, dated November 6 and 7, 1925, and paragraph 42 of the report of the meeting of the Examinations' Committee held on November 9, 1927, adopted by the Board).

examination in the subject in which he failed on payment of the fee prescribed in these Regulations ; and if he passes in that subject he shall be deemed to have passed the examination.

18(a). The answer-books of candidates who are eligible for the compartmental examination under Regulation 18, Chapter XII, as well as of those who have failed in one subject only by not more than 5 per cent. of the marks assigned to that subject, shall be scrutinized in accordance with the rules framed by the Board.

19. Heads of recognized institutions are not entitled to detain candidates who have fulfilled the conditions laid down for permission to appear at one of the Board's examinations, except for very grave reasons and with the previous sanction of the Chairman of the Board.

### CHAPTER XIII.

#### HIGH SCHOOL EXAMINATION.

1. The following are the subjects prescribed for the High School Examination of the Board :—

##### *Compulsory.*

- (1) English.
- (2) Mathematics.
- (3) History or Geography.
- (4) One of the following Modern Indian Languages :—  
Hindi, Urdu, Bengali, Marathi and Gujarati.

##### *Optional.*

- (1) One of the following Classical Languages :—  
Sanskrit, Arabic, Persian and Latin.
- (2) Commerce.
- (3) Physics and Chemistry.
- (4) Agriculture.
- (5) Drawing.
- (6) Manual Training.
- (7) A Modern European Language.
- (8) Domestic Science.
- (9) Metal Work.
- \*(10) History or Geography.
- (11) Book-binding.

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\*A candidate taking History or Geography as a compulsory subject must not offer the same subject as an optional subject.

(12) Spinning and Weaving.

(13) General Science (Physics, Chemistry and Biology).

*N.B.*—Candidates must take up one optional subject for examination, and no candidate will be examined in more than one such subject, in addition to the compulsory subjects, at one and the same examination: provided that a candidate who has passed the High School or an equivalent examination in a place outside the United Provinces may present himself for examination in any subsequent year in one or more optional subjects without re-examination in the compulsory subjects; and such a candidate will, if successful, be entitled to have an entry made in the certificate already granted to him, certifying in which additional optional subject or subjects he has passed.

2. A candidate is not entitled to a certificate of having passed the High School Examination unless he qualifies separately in each subject offered by him thereat.

3. Diaries shall be kept by all teachers employed in teaching classes preparing for the High School Examination showing the work done in class in each subject taught by them, and such diaries shall be inspected by the oral or practical examiners or by such other authorities as the Board may depute.

4. The question papers set and the written answer-books of all candidates at terminal examination shall also be subject to inspection in such manner and by such authorities as the Board may direct.

5. The head of the institution shall furnish the oral or practical examiner, or such other authority as the Board may appoint, with a list of the candidates undergoing examination in the subject or subjects with which he is concerned, and shall make an entry against each name regarding the proficiency of the candidate as judged by his record therein during the course of study prescribed for the examination.

6. *Cancelled.*

7. Any candidate who has passed a \*public examination in an Oriental Language (Sanskrit, Persian or Arabic) or the examination in

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\* (a) The following examinations are recognized by the Board as public examinations in an Oriental Language under this Regulation and Regulation 7, Chapter XIV :—

(1) Maulvi, Alim, Mulla (now defunct) and Fazil in Arabic, and Munshi and Kamil in Persian, conducted by the Education department of the United Provinces, (2) the Sanskrit Examinations conducted by the Government Sanskrit College, Benares, and by the Benares Hindu University [*vide* Board's Resolution no. 33, dated November 6 and 7, 1925, and paragraph 2 of the report of the meeting of the Examinations' Committee held on February 4, 1926, adopted by the Board], (3) the Diploma Examinations in Arabic and Persian conducted by the Lucknow University [*vide* Board's Resolution no. 18 (g), dated November 3, 1926], and (4) the Sanskrit examinations conducted by the Department of Public Instruction, Jaipur State [*vide* resolution 7 of the meeting of the Examinations' Committee held on November 8, 1928 and Resolution 31(c) of the meeting of the Board held on November 9, 1928].

advanced Urdu or Hindi conducted by the department may be admitted as a private candidate to the High School Examination in English only, and shall, if successful, be entitled to a certificate of having passed the examination in English only. Similar concession may be given to candidates residing in the United Provinces, who have passed an examination in a vernacular language (Hindi or Urdu) conducted by the Oriental Faculty of the Punjab University, and to Drawing Masters working in institutions \* recognized by the Board who have read up to the High School Standard.

8. †Candidates for the High School Examination are permitted to answer questions in English, Urdu, or Hindi in all subjects other than English.

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- (b) Candidates residing in the United Provinces who have passed an examination (Sanskrit, Persian or Arabic) of the Oriental Faculty of the Punjab University may also apply for permission to appear at the High School Examination in English only as private candidates (*vide* paragraph 39 of the report of the meeting of the Examinations' Committee held on November 9, 1927, adopted by the Board).

\* Includes Middle English Schools (resolution 7 of the Examinations' Committee, dated February 19, 1932).

† This regulation should be read in the light of the following notes :—

(1) A candidate for the High School Examination may answer questions in English in one or more subjects and in Hindi or Urdu in the remaining subjects in which a vernacular medium is permitted.

(2) The option of using a vernacular medium of examination has been given in the following subjects *only* and in the following manner *with effect from* the date noted against each :—

- |  |                                    |
|--|------------------------------------|
| (a) Sanskrit and Hindi—through the medium of English or Hindi.   | } High School Examination of 1927. |
| (b) Arabic, Persian and Urdu—through the medium of English or Urdu.  |                                    |
| (c) History and Geography—through the medium of English, Hindi or Urdu.  |                                    |
| (d) Agriculture—through the medium of English, Hindi or Urdu.  | } High School Examination of 1929. |
| (e) Mathematics—through the medium of English, Hindi or Urdu.  |                                    |
| (f) Domestic Science—through the medium of English, Hindi or Urdu.   |                                    |
| (g) Physics and Chemistry—through the medium of English, Hindi or Urdu on condition that in case of the Vernacular medium, English scientific technical terms may be used. | } High School Examination of 1931. |
| (h) General Science—through the medium of English, Hindi or Urdu on condition that in case of the Vernacular medium, English scientific technical terms may be used.       |                                    |

CHAPTER XIII(a).

DIPLOMA EXAMINATION IN INDIAN MUSIC.

1. The Diploma Examination in Indian Music shall be open to:—
  - (a) candidates who have completed a regular course of study at an institution recognised by the Board for the examination ;
  - (b) private candidates eligible under the regulations including regular students going up for the High School or Intermediate Examination and candidates who have failed at the said Diploma Examination.
2. The courses of study for the examination shall be as may be laid down in the Prospectus from year to year.

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CHAPTER XIV.

INTERMEDIATE EXAMINATION.

1. Every candidate for admission to the Intermediate Examination shall be required to have passed the Board's High School Examination, or to have passed an examination which by Regulation is declared equivalent thereto, before entering upon the course of study prescribed for the Intermediate Examination.

2. The following examinations are declared equivalent to the Board's High School Examination for the purpose of enabling candidates to enter upon the course of study prescribed for the Intermediate Examination :—

- (1) the Matriculation Examination of any University established by law in India approved for the purpose by the Board.  
(The Matriculation Examinations of the following Universities are approved by the Board:—Allahabad, the Punjab, Bombay, Calcutta, Madras, Patna, \*Benares and \*Aligarh) ;
- (2) the School-Leaving Certificate Examination of the United Provinces, or of another province, provided this examination is accepted as equivalent to Matriculation by the University established by law in that province ;

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\* By Matriculation Examination of the Benares Hindu and Aligarh Muslim Universities the Admission Examination of the former and the High School Examination of the latter are meant.

- (3) the Cambridge School Certificate (formerly called Senior Local) Examination, provided a student has passed in five of such subjects as are recognized for the High School Examination of the Board of High School and Intermediate Education, United Provinces ;
- (4) the Diploma Examination of the Chiefs' Colleges ;
- (5) the High School Examination for European Schools in the Central Provinces and in other provinces ;
- (6) the High School Certificate Examination of the Board of High School Education, Central Provinces ;
- (7) the Anglo-Vernacular High School and the English High School Examinations of Burma ;
- (8) the London University Matriculation Examination ;
- (9) the English School-Leaving Certificate Examination of the Travancore State ;
- (10) the High School-Leaving Certificate Examination of Hyderabad (Deccan), provided a candidate has passed in class I or class II ;
- (11) the Secondary School-Leaving Certificate Examination of Mysore, provided a candidate has been declared eligible for admission to a University course ;
- (12) the Diploma Examination of the Royal Indian Military College, Dehra Dun, so long as the syllabus and the standard of the examination continue to be the same as those of the examination recognized in the foregoing clause (4) ;
- (13) \*the High School Examination of the Board of Secondary Education, Delhi, provided a candidate has passed the

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\* A candidate who has passed the High School Examination of the Delhi Board in English, Mathematics and any †three of the following subjects is eligible to enter upon the course of study prescribed for the Intermediate Examination :—

- (1) A Classical Language (Sanskrit, Arabic, Persian, Hebrew, Latin or Greek).
- (2) Physics and Chemistry.
- (3) Any two of the following as one subject :—
  - I. Indian History.
  - II. English History.
  - III. General Geography.
  - IV. Commercial Geography.
  - V. Elementary Economics.

† At least one of these three subjects must be taken from among subjects numbered (1), (2), (3) and (9), the last subject intended for female candidates only.

examination with an additional subject under Regulation 3, Chapter XII of the Delhi Board's Regulations, and provided, further, that he has passed in five full subjects excluding Elementary Economics and (except in the case of female candidates) Physiology and Hygiene, and Domestic Science.

- (14) the High School Examination of the Board of High School and Intermediate Education, Rajputana (including Ajmer-Merwara), Central India and Gwalior, Ajmer.

3. No candidate shall be admitted to the Intermediate Examination unless two academical years shall have elapsed since the date of his or her passing the High School or an equivalent examination :

\*provided that candidates who have passed the Cambridge School Certificate (Senior Local) Examination may be admitted to the Intermediate Examination in the academical year following that in which they pass the Cambridge School Certificate Examination.

4. Any student who has kept one academical year at a college affiliated to the Universities of Calcutta, Madras, Bombay, Patna, Benares, the Punjab, Nagpur, Delhi, Aligarh or Rangoon after matriculation, may be allowed a year corresponding to that which he has so kept, provided he produces a satisfactory certificate from the Principal of a college affiliated to the Universities of Calcutta, Madras, Bombay, Patna, Benares, the Punjab, Nagpur, Delhi, Aligarh or Rangoon that the corresponding year has been duly kept

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- (4) Agriculture.  
(5) Drawing.  
(6) An Indian Vernacular.  
(7) French.  
(8) Any two of the following as one subject (Commerce) :—  
I. Business or Commercial Practice.  
II. Elementary Book-keeping.  
III. Indian System of Accounts.

- (9) Domestic Science (for female candidates only).  
(10) Physiology and Hygiene (for female candidates only).

(vide resolution 7 of the Examinations' Committee, dated January 12, 1931, adopted by the Board.)

\*Candidates intending to appear under this proviso are eligible to appear as private candidates also, provided they fulfil the necessary conditions, [vide Board's Resolution no. 24 (last paragraph), dated November 8, 1924.]

according to the regulations in force at the University from which he has\* migrated, and that the said Principal has no objection to his transfer.

5. Every candidate for the Intermediate Examination shall be examined in English and any three of the following subjects:—

- (1) Mathematics.
- (2) Chemistry.
- (3) Physics.
- (4) Biology.
- (5) Drawing.
- (6) Economics.
- (7) Civics.
- (8) History and Allied Geography.
- (9) Histories of Greece and Rome and Allied Geography.
- (10) Geography.
- (11) Logic.
- (12) A Modern Indian Language (Urdu or Hindi or Bengali or Marathi or Gujarati), or a Modern European Language (German or French).
- (13) A Classical Language, viz., Sanskrit, Arabic, Persian, Latin, Greek or Hebrew.
- (14) †Physiology, Hygiene and Child-Study (for girls only).
- (15) Physiology, Hygiene and Elementary Psychology (for boys only).

6. Any candidate who has passed the Intermediate Examination of the Board or an examination equivalent thereto may appear at any subsequent Intermediate Examination or Examinations conducted

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\*The Board has framed no rules nor prescribed any form regarding migration of students from or to its territorial jurisdiction. A candidate intending to migrate to a place outside the jurisdiction of the Board should communicate with the Circle Inspector of Schools through the head of his last institution. In case the candidate is a resident of a place outside the United Provinces, he should communicate with the head of his last institution.

This regulation (regulation 4, Chapter XIV) applies to candidates for the Intermediate Examinations in Commerce and Agriculture also (*vide* resolution 19 of the Examinations' Committee, dated March 28, 1931 and resolution 15 of the Board dated November 5, 1931.)

†A special subject intended to prepare girls either for the teaching profession or for domestic life (*vide* Board's Resolution no. 3, dated November 8, 1924).

by the Board in any subject in which he has not previously passed the Intermediate Examination, provided that in the case of a subject for which practical work or a practical examination is prescribed he produces evidence satisfactory to the Board that he has completed the practical course prescribed for the subject.

7. \*Any candidate who holds a certificate of having passed the High School Examination in English only under Regulation 7, Chapter XIII, or of having passed an examination equivalent to the High School Examination in English only under similar conditions, may be admitted as a private candidate to the Intermediate Examination in English only, provided at least one academical year shall have elapsed since the date of his or her passing the High School or an equivalent examination in English, and such a candidate shall, if successful, be entitled to a certificate of having passed the examination in English only.

## CHAPTER XV.

### INTERMEDIATE EXAMINATION IN COMMERCE.

1. Every candidate for admission to the Intermediate Examination in Commerce shall be required to have passed the Board's High School Examination or an examination †equivalent thereto, and to have, since the passing of this examination, prosecuted a regular course of study for not less than two academical years at an institution recognized by the Board for the Intermediate Examination in Commerce.

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\*Passing the High School Examination in all subjects may be accepted as a fulfilment of the condition of passing in English required in this Regulation, provided that the candidate has also passed a recognized public examination in an Oriental Language or the examination in advanced Urdu or Hindi conducted by the department [*vide* Board's Resolution no. 34 (a), dated November 6 and 7, 1925, and Private Candidates Committee's Resolution no. 3, dated October 23, 25 and 26, 1929, adopted by the Board].

†See Regulation 2, Chapter XIV.

2. \*Inspecting officers of an Education department and teachers in schools and colleges recognized by the Board may be admitted to this examination as private candidates by special permission of the Board, provided that by the date of the examination not less than two academical years shall have elapsed since the date of their passing the High School Examination or an examination equivalent thereto.

3. The following are the subjects of examination. These may be arranged in alternative groups in such manner and with such additions and alterations as the Board may, from time to time, decide :—

*Compulsory.*

- (1) English.
- (2) Book-keeping and Accountancy.
- (3) Business Methods and Correspondence.
- (4) (a) Elementary Economics.  
(b) Commercial Geography.

*Optional.*

One of the following:—

- (1) Steno-typing (shorthand and typewriting).
- (2) Elements of Banking.
- (3) Elements of Industrial Organization.
- (4) Mathematics.

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CHAPTER XV (a).

INTERMEDIATE EXAMINATION IN AGRICULTURE.

1. Every candidate for admission to the Intermediate Examination in Agriculture shall be required to have passed the Board's High School Examination, or an examination equivalent thereto, and to have, since the passing of this examination, prosecuted a regular course of study for not less than two academical years at an institution recognized by the Board for the Intermediate Examination in Agriculture :

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\*Failed candidates of the Intermediate Examination in Commerce may also be admitted to a subsequent examination as private candidates under Regulations 16 and 17, Chapter XII (*vide* paragraph 6 of the report of the meeting of the Committee of Courses in Commerce held on November 8, 1923).

† See Regulation 2, Chapter XIV.

provided that a candidate who has passed the Intermediate Examination of the Board or an examination equivalent thereto with Chemistry and Biology as optional subjects may be admitted to the Intermediate Examination in Agriculture after prosecuting a regular course of study for not less than one academical year since the date of his passing the aforesaid examination at an institution recognized by the Board for the Intermediate Examination in Agriculture.

2. The following are the subjects of examination arranged in groups. The Board may make such additions and alterations in them as it may, from time to time, decide :—

Group I.—Chemistry and Physics.

Practical Chemistry and  
Practical Physics.

Group II.—Botany and Zoology.

Practical Botany and  
Practical Zoology.

Group III.—Physical properties of soil, Soil Geology, Climatology.

Tillage and of Plant Feeding, Principles of Manuring.  
Principles of Irrigation and Drainage. .  
Practical Farming.

Practical A.—Crop Culture.

Practical B.—Farm Machinery, including ploughing  
and other tillage operations.

Practical C.—Animal Husbandry.

Group IV.—English.

Prose text-books, books recommended for general  
study, unseens and grammar.

Translation and Composition.

Group V.—Economics or Mathematics.

**MAXIMUM AND MINIMUM MARKS ASSIGNED TO THE VARIOUS  
SUBJECTS FOR THE EXAMINATIONS OF 1934.**

**HIGH SCHOOL EXAMINATION.**

Maximum marks	..	..	150 in English and 100 in every other subject.
Minimum pass marks	..	..	50 in English and 33 in every other subject.

**INTERMEDIATE EXAMINATION.**

Maximum marks	..	..	150 in English and 100 in every other subject.
Minimum pass marks	..	..	50 in English and 33 in every other subject.

**INTERMEDIATE EXAMINATION IN COMMERCE.**

Maximum marks	..	..	100 in each subject.
Minimum pass marks	..	..	33 ditto.

**INTERMEDIATE EXAMINATION IN AGRICULTURE.**

Maximum marks	..	..	100 in groups I and II each, 150 in group III and 50 in groups IV and V each.
Minimum pass marks	..	..	33 per cent. in each group.

**DISTINCTION.**

Minimum marks required	..	..	75 per cent. of the aggregate marks in a subject.
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**DIVISION.**

Minimum pass marks required for	60 per cent. in the aggregate.
division I.	
Minimum pass marks required for	45 per cent. in the aggregate.
division II.	
Minimum pass marks required for	33 per cent. in the aggregate.
division III.	

# TEXT-BOOKS AND SYLLABUS

FOR  
THE BOARD'S EXAMINATIONS OF 1934.

## HIGH SCHOOL EXAMINATION.

A.—COMPULSORY SUBJECTS.

### I.—ENGLISH.

Three papers, each of three hours, will be set (1) on the prescribed course in Prose and Poetry with questions on Grammar and Idiom, (2) on Unseen Passages with questions on Grammar and Idiom, (3) passages in a Modern Indian Language for translation into English and a simple narrative or descriptive composition in English. There will be no oral test, but there will be an examination in English Dictation at each centre. In selecting passages for Dictation care will be taken to avoid passages of a highly abstract character.

Text-books prescribed for detailed study :—

#### *Group A.—*

1. School Selections from Modern Prose, by Egerton Smith (K. and J. Cooper, Bombay). Re. 1.
2. Modern High School Prose Selections, by D. P. Khattry (Oxford University Press). Re. 1.
3. New High School Prose Selections (National Press, Allahabad). Re. 1.

#### *Group B.—*

1. The Great and the Good, by R. Sahai (Indian Press, Ltd., Allahabad). Re. 1.
2. Forerunners, by H. G. Rawlinson (Oxford University Press).
3. Indian Historical Readers, Book III.—Romance in Indian History (Macmillan & Co.).

#### *Group C.—*

1. Pattern Poetry, Part IA (Nelson), from which the following poems are prescribed :—  
The Sleeping Beauty ; Lochinvar ; Soldier's Dream ; the Eve of Bannockburn ; Lucy Gray ; The Burial of Sir John Moore ; Sam's Three Wishes.

2. High School Poetry (Revised edition), (Indian Press, Limited, Allahabad), from which the following poems are prescribed :—

The Burial of Sir John Moore ; The Last Minstrel ; Jaffar ; John Gilpin ; Hohenlinden ; How they Brought the Good News ; Yussouf ; The Deserted Village ; The Ocean ; An Evening Walk ; The Poor ; The Little Black Boy ; The Mountain and the Squirrel ; Frolic ; A Consecration.

3. Types of English Poetry, Part I (Macmillan & Co.), annas 6, from which the following poems are prescribed :—

Hymn to God ; The Rainbow ; Psalm of Life ; Shortness of Life ; Patriotism ; The Child's First Grief ; The Beggarman ; The Sailor Boy ; The Ladder of St. Augustine ; Home they brought her Warrior Dead ; To the Cuckoo ; Stanzas written in his Library ; Casabianca ; The Village Blacksmith.

NOTE.—Teachers are advised to see that students use the Anthologies named in the prospectus and no inaccurate reprints of the actual poems prescribed.

N.B.—The above text-books are arranged in three groups—A, B and C. Group A contains books of Prose Selections, Group B books of Inspirational Stories, and Group C books of Poetry. Every school must select for study one book only from each of the above groups.

Books recommended for rapid reading and indicating the standard of the unseen passages to be set in the second paper :—

1. Scott's Ivanhoe (Oxford University Press, abridged, by Wren or Victory Series, Ram Narain Lal, Allahabad).
2. The Golden Deeds of India, First Series, by L. and H. G. D. Turnbull (Oxford University Press).
3. Tanglewood Tales (Longmans, Green & Co.).
4. Sakuntala (Longmans, Green & Co.).
5. Shakespeare in Prose (Blackie).
6. Stories from the Arabian Nights (Nelson).
7. Fournier : The Wonders of Physical Science (Macmillan).
8. Jungle Book (Macmillan).
9. A Persian Hero (Macmillan).
10. The Exploits of Brigadier Gerard (Oxford University Press).
11. Stories from Tagore (Macmillan).
12. Treasure Island (Oxford University Press).

13. Simple Chapters in English Life (Rai Sahib Gulab Singh & Sons, Lahore).
14. Stories from Shakespeare, by Wyatt (Oxford University Press).
15. The Little Duke (Indian Press School Classics).
16. Pioneers of Invention (George G. Harrap & Co.).
17. Men of Science (George G. Harrap & Co.).
18. The Story of the Ramayana (Indian Press, Allahabad).
19. Kupfer : Legends of Greece and Rome (Heath).
20. Socrates in an Indian Village (Rupee edition, Oxford University Press).
21. Tom Browne's School Days (abridged Oxford edition).
22. Legends from Greece and Rome (Victory Series).
23. Robinson Crusoe (Victory Series).
24. Mukerji : Ancient Indian Fasts and Feasts (Macmillan).
25. Lamb's Tales from Shakespeare (Indian Press, Allahabad).
26. A Book of Stories (Ram Narain Lal, Allahabad).
27. In Other Lands (Uttar Chand Kapur, Lahore).

Recommended for use by students :—

The Little Oxford Dictionary.

## II.—MATHEMATICS.

There will be two papers, each of three hours—one in Arithmetic and Algebra and the other in Geometry and Mensuration.

### SYLLABUS.

#### (1) Arithmetic and Algebra.

The four simple rules ; British and Metric systems of measurement ; Factors ; Prime numbers ; H. C. F. and L. C. M. ; Decimal and vulgar fractions (including conversion of a recurring decimal to a vulgar fraction and conversely) ; Square Root ; Ratio and Proportion ; Average ; Percentages ; Profit and Loss ; Interest, simple and compound ; Present Worth and Discount (true and commercial) ; Areas and volumes ; Simple equations of one or more unknown quantities ; Quadratic equations of one unknown quantity ; Graphs of statistics ; Graphs of straight lines and graphical solution of linear simultaneous equations ; Problems.

*N.B.—Candidates will be provided with squared paper, if necessary.*

## (2) Geometry and Mensuration.

The course includes theoretical, practical and numerical Geometry, and every candidate will be expected to answer questions in both branches of the subject. The questions on practical Geometry will be set on the constructions contained in the annexed Schedule A, together with easy extensions of them. All figures should be drawn accurately, for which purpose every candidate should provide himself with a graduated scale, a pair of set squares, a protractor, a compass and a hard pencil. The questions on theoretical Geometry will consist of theorems and problems contained in the annexed Schedules A and B, together with easy extensions and deductions with numerical illustrations. Any proof of a proposition will be accepted which appears to the examiners to form part of a systematic treatment of the subject; the order in which the theorems are stated in Schedule B is not imposed as the sequence of their treatment. In the proof of the theorems hypothetical constructions will be permitted.

*N.B.—Candidates will be provided with squared paper, if necessary.*

### SCHEDULE A.

- Bisection of angles and of straight lines.
- Construction of perpendiculars to straight lines.
- Construction of an angle equal to a given angle.
- Construction of parallels to a given straight line.
- Simple cases of the construction from sufficient data of triangles and quadrilaterals.
- Division of straight lines into a given number of equal parts.
- Construction of a triangle equal in area to a given polygon.
- Construction of tangents to a circle and of common tangents to two circles.
- Simple cases of the construction of circles from sufficient data.
- Construction of a rectangle equal to a given polygon.
- Construction of a rectangle on a given base equal in area to a given rectangle.
- Construction of a square equal to a given rectangle.

Construction of a rectangle of given area the sum or difference of whose sides is given. (These constructions should be based on the propositions on the geometry of the circle.)

Construction of a fourth proportional to three given straight lines and a mean proportional to two given straight lines (as corollaries to previous constructions of rectangles).

Construction of regular figures of 3, 4, 6 or 8 sides in or about a given circle.

Mensuration of triangles and simple rectilineal figures ; finding their area by means of field book ; application of formulae for length of circumference and for area of a circle in terms of its radius.

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### SCHEDULE B.

#### *Angles at a point.*

If a straight line stands on another straight line, the sum of the two angles so formed is equal to two right angles ; and the converse.

If two straight lines intersect, the vertically opposite angles are equal.

#### *Parallel straight lines.*

When a straight line cuts two other straight lines, if—

- (i) a pair of alternate angles are equal, or
- (ii) a pair of corresponding angles are equal, or
- (iii) a pair of interior angles on the same side of the cutting line are together equal to two right angles, then the two straight lines are parallel ; and the converse.

Straight lines which are parallel to the same straight line are parallel to one another.

#### *Triangle and rectilineal figures.*

The sum of the angles of a triangle is equal to two right angles.

If the sides of a convex polygon are produced in order, the sum of the angles so formed is equal to four right angles.

If two triangles have two sides of the one equal to two sides of the other, each to each, and also the angles contained by these sides equal, the triangles are congruent.

If two triangles have two angles of the one equal to two angles of the other, each to each, and also one side of the one equal to the corresponding side of the other, the triangles are congruent.

If two sides of a triangle are equal, the angles opposite to these sides are equal ; and the converse.

If two triangles have the three sides of the one equal to the three sides of the other, each to each, the triangles are congruent.

If two right angled triangles have their hypotenuses equal and one side of the one equal to one side of the other, the triangles are congruent.

If two sides of a triangle are unequal, the greater side has the greater angle opposite to it ; and the converse.

Of all the straight lines that can be drawn to a given straight line from a given point outside it, the perpendicular is the shortest.

The opposite sides and angles of a parallelogram are equal, each diagonal bisects the parallelogram and the diagonals bisect one another.

If there are three or more parallel straight lines and the intercepts made by them on any straight line that cuts them are equal, then the corresponding intercepts on any other straight line that cuts them are also equal.

#### *Areas.*

Parallelograms on the same or equal bases and of the same altitude are equal in area.

Triangles on the same or equal bases and of the same altitude are equal in area.

Equal triangles on the same or equal bases are of the same altitude

Illustrations and explanations of the geometrical theorems corresponding to the following algebraical identities :—

$$k(a + b + c + \dots) = ka + kb + kc + \dots$$

$$(a + b)^2 = a^2 + 2ab + b^2.$$

$$(a - b)^2 = a^2 - 2ab + b^2.$$

$$a^2 - b^2 = (a + b)(a - b).$$

The square on a side of a triangle is greater than, equal to, or less than the sum of the squares on the other two sides according as the angle

contained by these sides is obtuse, right or acute. The difference in the case of inequality is twice the rectangle contained by one of the two sides and the projection on it of the other.

In any triangle the sum of the squares on two sides is equal to twice the square on half the third side together with twice the square on the median which bisects the third side.

#### *Loci.*

The locus of a point which is equidistant from two fixed points is the perpendicular bisector of the straight line joining the two fixed points.

The locus of a point which is equidistant from two intersecting straight lines consists of the pair of straight lines which bisect the angles between the two given lines.

#### *The circle.*

A straight line drawn from the centre of a circle to bisect a chord which is not the diameter is at right angles to the chord ; conversely, the perpendicular to a chord from the centre bisects the chord.

There is one circle and one only which passes through three given points not in a straight line.

In equal circles (or in the same circle), (i) if two arcs subtend equal angles at the centres, they are equal ; (ii) conversely, if two arcs are equal, they subtend equal angles at the centre.

In equal circles (or in the same circle), (i) if two chords are equal, they cut off equal arcs ; (ii) conversely, if two arcs are equal, the chords of the arcs are equal.

Equal chords in a circle are equidistant from the centre ; and the converse.

The tangents at any point of a circle and the radius through the point are perpendicular to one another.

If two circles touch, the point of contact lies on the straight line through the centres.

The angle which an arc of a circle subtends at the centre is double that which it subtends at any point on the remaining part of the circumference.

Angles in the same segment of a circle are equal, and if the line joining two points subtends equal angles at two other points on the same side of it, the four points lie on a circle.

The angle in a semi-circle is a right angle, the angle in a segment greater than a semi-circle is less than a right angle, and the angle in a segment less than a semi-circle is greater than a right angle.

The opposite angles of any quadrilateral inscribed in a circle are supplementary ; and the converse.

If a straight line touch a circle and from the point of contact a chord be drawn, the angles which this chord makes with the tangent are equal to the angles in the alternate segments.

If two chords of a circle intersect either inside or outside the circle, the rectangle contained by the parts of the one is equal to the rectangle contained by the parts of the other.

The following books are suggested :—

For *Arithmetic*—

1. Workman, adapted by Sime and revised by Parkinson : A New Arithmetic for Indian Schools (R. S. Gulab Singh and Sons, Lahore).
2. Oudh Upadhyaya : New Arithmetic (Ram Narain Lal, Allahabad).
3. S. B. L. Kapoor : High School Arithmetic (Agarwal Press, Allahabad).

For *Algebra*—

1. ROSS : Elementary Algebra, Part I (Longmans, Green & Co.).
2. BAKER AND BOURNE : Elementary Algebra, Part I (G. Bell & Sons).
3. H. S. HALL : School Algebra, Parts I and II (Macmillan & Co.)

For *Geometry*—

1. HALL AND STEVENS : A Shorter School Geometry, Parts I and II (Macmillan & Co.).
2. PARKINSON AND PRESSLAND : A Primer of Geometry (Clarendon Press, Oxford), (Indian edition). Re. 1-12.
3. PIERPOINT'S Elements of Geometry.

4. The New Sequence Geometry, by Gray and Smith (The Grant Educational Company), (to be had of the Indian School Supply Dépôt, Calcutta).
5. Analytic Geometry, Part II, by S. B. L. Kapoor (Agarwal Press, Allahabad).

### III.—HISTORY.

There will be two papers, each of three hours :—

- (i) Indian History and Allied Geography, and
- (ii) English History and Allied Geography.

N.B.—Candidates are expected to draw free hand maps of India and Great Britain and Ireland.

#### Indian History.

*Indian History in outline from the earliest times to 1919.*

The following syllabus is suggested :—

I.—The influence of Geography on Indian History.

II.—Ancient India—

A.—Vedic period till 600 B.C.—

1. The Dravidians.
2. The Aryan immigration.
3. Character of culture—
  - (a) Vedic religion—outline.
  - (b) Vedic society—caste, woman.
  - (c) Literature—Veda (Brahman, Upanishad, Smriti).

B.—Buddhist period, 600—180 B.C.—

1. Life and teaching of Buddha.
2. Mauryas, Asoka.
3. Culture—
  - (a) Dharma.
  - (b) Government.

C.—Hindu period, 180 B.C.—650 A.D.—

1. Sungas, Kanvas, Andhras.
2. Yuechis, Kushanas, Kanishka.
3. Guptas—Samudragupta, Chandragupta Vikramaditya.
4. Harsha.
5. Culture—
  - (a) Religion—Puranas, Epics, toleration.
  - (b) Literature—Kalidasa.
  - (c) Art—Ajanta, Amaravati.

D.—Rajput period, 650 A.D.—1200 A.D.—

1. The origin of Rajputs.
2. Rajput Kingdoms, Chauhans, Chandels, Gaharwar (Rathor).
3. The South—Pandyas, Pawars, Cholas and Keralas.
4. The Deccan—Yadavas, Chalukyas, Rashtrakutas.

III.—Medieval India—

A.—Early medieval—

1. Life and teaching of Muhammad.
2. The Arab expansion.
3. The Turks and their kingdoms.
4. Turkish invasions—
  - (a) Mahmud of Ghazni.
  - (b) Muhammad Shahab-ud-din Ghor.
  - (c) The Slave kings—Balban and Mongol invasions.
  - (d) The Khiljis, Ala-ud-din and conquest of the south.
  - (e) The Tughlaks—Muhammad and Firoz—break-up of early medieval empire.
  - (f) Provincial principalities and invasions of Timur.
  - (g) The Hindu Kingdoms of the south.
  - (h) Culture.

Religion—Kabir.

Literature—Growth of Modern Indian Languages.

B.—Later medieval—

- (a) 1. Sayyads and Lodis—Dissensions.
2. Babar and Humayun—Conquest and failure.
3. Sher Shah.
4. Akbar—Conquest and Consolidation.
5. Jahangir, Shahjahan—prosperity.
6. Aurangzeb—  
Religious quarrels.  
Conquest of the south.
7. Successors of Aurangzeb.  
Decay of Empire.
- (b) Mahrattas—Shivaji—The struggle with the Mughals—The Peshwas up to 1761.
- (c) Sikhs—Nanak and Guru Govind Singh.

(d) Early European settlements, 1600—1708.

1. Portuguese—Discovery of the route from Europe to India.
2. Dutch—Settlement in the Spice archipelago.
3. English—Embassies to Mughal emperors and establishment of factories.
4. French—Establishment of factories.

(e) Culture—

Religions, Bhakti movement.

Art—Taj.

Literature 1. Hindi—Tulsidasa, Surdasa, Rahim, Malik Muhammad Jaisi.

2. Urdu.

IV.—Modern India—

- A.—1. Struggle between the Empire and the Mahrattas.  
2. Break-up of the Empire and the establishment of Subedars.  
3. Sikhs—Ranjit Singh.  
4. Mahratta and other Indian States.
- B.—1. Struggle of the European Powers. The French and the British (1700—1763).  
2. Struggle between the English and Indian princes (1756—1774). Conquest of Bengal.
- C.—British rule, 1774—1857—
1. Warren Hastings—
    - (i) Regulating Act.
    - (ii) Internal difficulties.
    - (iii) Wars with the Indian rulers.
  2. Cornwallis—
    - (i) The permanent settlement.
    - (ii) Wars with Indian rulers.
  3. Wellesley—
    - (i) The subsidiary alliance system.
    - (ii) The French rivalry.
    - (iii) Wars and expansion of British territory.
  4. Minto—Embassies to Asiatic Powers.
  5. Hastings—Nepal war, Mahratta wars.
  6. Bentinck—Reforms.

7. Auckland and Ellenborough—Afghan wars.
8. Hardinge—Punjab war.
9. Dalhousie—Completion of dominion.

D.—British rule, 1857—1919—

(a) Wars and expansion—

1. Afghanistan.
2. Burma.

(b) Internal developments—

1. Constitutional, 1861, 1892, 1909, 1919.
2. Local Self-Government.
3. Education.
4. Justice.
5. Administration.

(c) National movements—

1. Hindu reforms.
2. Muslim reforms.
3. Growth of Nationalism, Indian National Congress.

The following books indicating the scope and standard of knowledge required are recommended :—

1. V. A. Smith : Oxford Students' History of India (Clarendon Press, Oxford). Re. 1-12.
2. R. D. Banerji : History of India (Blackie and Sons, London).
3. Thompson : History of India (Christian Literature Society, Madras).
4. Hoernle and Stark : A History of India (Orissa Mission Press, Cuttack).
5. Students' Atlas of Indian History (Macmillan).
6. Manmatha Nath Rai : History of India in Urdu and Hindi, second edition (Nand Kishore and Bros., Benares).
7. Ishwari Prasad : Students' History of India in Hindi and Urdu, second edition (The Indian Press, Allahabad).
8. Garrett, Manmohan and Sohan Lal : Historical Atlas in Urdu (Rai Sahib Gulab Singh and Sons, Lahore).
9. Veda Vyas : History of India (Urdu and Hindi), (Shamsher Singh and Company, Lahore).

### English History.

*English History in outline from the earliest times to 1914 A.D.*

The following syllabus is suggested :—

I.—The influence of Geography on English History.

II.—History of England, early and middle ages.

A.—Early history up to 410 A.D.—

1. Briton and their way of living.
2. Roman occupation, results of occupation.

B.—Anglo-Saxons, 410 A.D. to 1066 A.D.—

1. The settlement of Angles, Saxons, Jutes, etc.
2. Conversion to Christianity.
3. Rise of Wessex to supremacy.
4. The Danish invasions.
5. Alfred the Great.
6. Danish conquest and Canute.

C.—The Normans, 1066—1216 and the Angevins.

1. William the Conqueror—feudalism.
2. William's successors—Disorders.
3. Angevins—formation of the English nation, English possessions on the continent, foundation of liberties.
4. Richard and the Crusades.
5. John and the Great Charter.

D.—The Plantagenets, 1216—1399.

(1) The thirteenth century.

Henry III—the beginning of Parliament, Simon de Montfort.

Edward I—Establishment of Parliament, Union of Great Britain (Wales and Scotland).

(2) The fourteenth century—

War with France.

Growth of Parliament.

The black death, Peasant's revolt, Social changes.

Wycliff and reform of religion.

(3) The House of Lankester, 1399—1485.

Wars with France.

Growth of power of Parliament and barons.

Baron's war.

Growth of Commerce and Industry.

III.—History of England, 1485—1688—

A.—Tudors, 1485—1603—

(1) Monarchy and Parliament.

(2) Religious evolution.

(3) Growth of commerce.

(4) Discoveries and beginning of colonial and sea power.

(5) Relations with European Powers.

B.—Early Stuarts, 1603—1649—

(1) Monarchy and Parliament.

(2) Religion—Puritans and Anglicans.

(3) Commercial and Colonial expansion.

(4) Civil War.

C.—The Commonwealth, 1649—1660—

(1) Cromwell—

(a) Scotland and Ireland.

(b) European Powers, navigation laws.

(c) Religious growth of Puritans.

(d) Parliament.

D.—Latter Stuarts, 1660—1688—

(1) Parliament—

(a) Parties.

(b) Cabinet.

(2) Relations with European Powers—France and Holland.

(3) Colonial and Commercial expansion.

IV.—Constitutional Government, 1688—1914—

A.—William and Mary and Anne, 1688—1714—

(1) Bill of Rights.

(2) Parliament—

(a) Whigs and Tories.

(b) Cabinet.

(3) Affairs of Ireland.

(4) Relations with European Powers and growth of Colonial Power.

B.—Early Hanoverians, 1714—1763—

- (1) Walpole, Pitt.
- (2) European wars.
- (3) Colonial expansion.

C.—Latter Hanoverians, 1763—1830—

- (1) Industrial Revolution.
- (2) American Revolution.
- (3) French Revolution, Wars with France.
- (4) Ireland—Union.

D.—Rise of Democracy—

- (i) Reform Act.
- (ii) Home rule of Ireland.
- (iii) Growth of British Empire.
- (iv) Foreign policy and career of Peel, Palmerton, Disraeli, Gladstone.

N.B.—Students are expected to have a knowledge of “Representation of the People Act, 1918.”

The following books indicating the scope and standard of knowledge required are recommended :—

1. S. R. Gardiner : A School Atlas of English History (Longmans, Green and Co.).
2. Ed. J. S. Lay : The English People (Macmillan).
3. Oman : Junior History of England (Arnold).
4. S. R. Gardiner : Outline of English History (Longmans, Green and Co.).
5. T. F. Tout : A History of Great Britain, Book II (Longmans, Green and Co.).
6. Carter and Plaskitt : The Groundwork of English History (to be had of the Indian School Supply Dépôt, Calcutta).
7. Macmillan's Atlas of the British Empire.
8. Guest, G. : Outlines of British History (Oxford University Press, 1922). 2s. 6d.

9. Pupils' Study Book of English History, by J. T. Mulley, Books II, III and IV (by E. J. Arnold and Sons).
10. Raghu kul Tilak : History of Modern England, Urdu and Hindi (Indian Press, Allahabad).
11. S. D. Tripathi Shastri : History of the English People, Urdu and Hindi (Macmillan and Co.).
12. Ram Krishna Mathur : A Handbook of English History, Hindi and Urdu Versions (S. S. Mathur, Anand Pustakalaya, Cawnpore).
13. S. C. Kapoor : History of England, revised edition (1932) (Indian Press, Limited, Allahabad). Rs. 2.
14. Pran Nath Vidyalankar : History of England (Hindi), (Ganga Pustakmala Karyalaya, Lucknow).
15. J. Nelson Fraser : A first History of England (English), (K. & J. Cooper, Educational Publishers, Bombay).
16. Brij Mohan Sharma : History of England (Urdu), (Newal Kishore Press, Lucknow).
17. Vishveshwar Prasad : A History of England (Gautam Bros., Cawnpore).

or

#### Geography.

There will be two papers, each of three hours' duration, as follows :—

*Paper I.*—General Geography of the World outside of India.

(Sections I and II of the syllabus.)

*Paper II.*—India and its world relations. (Section III of the syllabus.)

#### *Syllabus.*

I. (a) Shape of the Earth ; rotation and revolution ; duration of day and night ; the seasons. Latitude and longitude. The commoner map projections, treated simply.

(b) Outlines of the relief and drainage of the lands and study of the chief land-forms. The hydrosphere : ocean currents, waves and the phenomena of tides.

(c) The atmosphere. Weather and climate. Study and measurement of temperature, pressure and rainfall. Climate. Seasonal

distribution over the globe of temperature, pressure and rainfall ; study of wind-belts, Ferrel's Law, Buys Ballot's Law, cyclones and anti-cyclones. Chief types of climate.

(d) Practical exercises based on simple contour maps.

II. (a) The world treated according to its major natural regions. Knowledge of the principles of physical geography and of the geographical distributions should be applied to the study *in outline* of the major natural regions of the world.

(b) The influence of his environment on man, his activities, his industries ; exchange of commodities ; communications ; growth of towns.

III. Geography of India in fuller detail. Its relations, physical and climatic, with contiguous areas ; its commercial relations with the world in general.

Books recommended :—

Morrison : Our World (Macmillan). Rs. 2-8.

Stamp : The World (Longmans). Rs. 3.

Morrison : Junior Geography of India (Nelson). 12 annas.

Unstead and Taylor : Essentials of World Geography (Philip). 2s.

Fairgrieve and Young : The World (Philip). 2s. 6d. (For general reading.)

French and Stamp : The Indian Empire (Longmans).

H. Pickles : India, World and Empire (Oxford). Rs. 2-4.

Wallis : Practical Exercises in Geography (Macmillan). 1s.

Fairgrieve and Young : Junior Contour Exercise Book (Philip).

3d.

Stamp : Geographical Exercise Books for India. Part I (Longmans). Annas 12.

Bartholomew : Indian School Atlas (Oxford Press). Re. 1-6-0.

Visual Contour Atlas (Philip). 1s. 4d..

Collin's Clear Type Atlas.

F. C. and N.D. Stamp : Practical Atlas of Modern Geography (George Gill & Sons). Re. 1-12.

Books of reference for teachers :—

Brooks : The World (London University Press). 7s. 6d.

Herbertson (F. D.) : Clarendon Geographies. Vols. I and II, 4s. each.

- Chisholm : Smaller Commercial Geography (Longmans). 5s.  
 Lyde : Man and His Markets (Macmillan). 3s.  
 Herbertson : Man and His Work (Black). 1s. 6d.  
 Davis : Elementary Physical Geography (Ginn). 5s. 6d.  
 Skeat : Principles of Geography (Oxford Press). 5s. 6d.  
 Mill : The Realm of Nature (Murray). 5s.  
 Mackay : The Oxford Picture Geographies (Oxford Press). 2s. 6d.  
 each.  
 Lands and Their Stories. Books I to VII (Blackie).  
 Peeps at Many Lands (Black). 2s. 10d. each.  
 The Indian Year Book (Times of India Office, Bombay). Rs. 5-4.  
 Goodchild : Geography and Man (Ram Narain Lal, Allahabad).  
 Rs. 2.  
 Wallis : Macmillan's Geographical Exercise Books, Northern  
 continents. 1s.  
 Wallis : Macmillan's Geographical Exercise Books, Southern  
 continents. 1s.  
 Newbigin : Man and his Conquest of Nature.  
 Hardy : Plant Geography (Oxford University Press).  
 Newbigin : Animal Geography (Oxford University Press).  
 Other books recommended for supplementary reading :—  
 s. d.  
 Lay : World Geography. (Macmillan) Book I 1 0  
 ( „ ) „ II 1 3  
 ( „ ) „ III 2 3  
 L. D. Stamp : Real Life Geography (George Gill & Sons). Re. 1.

#### IV.—MODERN INDIAN LANGUAGES.

There will be two papers, each of three hours, in each of these \* languages—one paper will be set in Prose Text and Unseen, and the other in Poetry Text and Composition. Grammatical questions will be set in both the papers. The ability of the Urdu candidates to read *Vikast* will be tested by means of a paper set for the purpose.

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There shall be a passage in simple English prose for translation into a Modern language as a compulsory part of the examination in Modern Indian Languages.

The following are the text-books prescribed :—

### Hindi.

Poetry :—1. अयोध्या काण्ड of Tulsi Das (Text as an the Nagari Pracharini Sabha edition).

2. जयद्रथ वध by Maithili Saran Gupta (Sahitya Sadan, Chirgaon, Jhansi).

3. Sur's Balkrishna, by Lala Bhagwan Din.

Prose :—Gadya Ratnawali with notes, by Professor Shyam Sundar Das (Indian Press, Allahabad).

Special attention should be paid to Hindi Composition. The following portion of Grammar should be paid special attention :—

Syntax, Parsing and Analysis.

The following Alankars and Chhands are to be studied :—

शब्दालंकार; अनुप्रास, यमक, इलेप

अर्थालंकार; उपमा, रूपक, उत्प्रेक्षा, अतिमान, हृष्टांत, संदेह, अत्युक्ति

अर्थान्तरन्यास, अपन्हुति

रसों के नाम और साधारण परिचय

मात्रिक छंद; दोहा, सारठा, चौपाई, कुंडलिया, रौला, गीतिका

The following books are recommended for Grammar and Composition :—

1. रचना प्रबोध by Ram Ratna (Ratnashram, Agra).

2. संक्षिप्त हिन्दी व्याकरण by Kamta Prasad Guru (Nagari Pracharini Sabha, Benares).

3. High School Hindi Vyakaran by Ganga Prasad (Rai Sahib Ram Dayal Agarwala, Allahabad).

4. Kavyang Kaumudi, Part I, by Vishwa Nath Prasad Misra and Mohan Ballabh Pant (Nand Kishore and Bros., Benares).

Books recommended for supplementary reading :—

1. Tara Charan Agnihotri.. "Maharashtra Keshari" (Ram Prasad and Bros., Agra).

2. Raja Lakshman Singh .. "Shakuntala Natak" (Ratnashram Press, Agra).

3. Jagannath Prasad "Milin-Pratapa Pratijna" (Hindi da". Bhavan, Lahore).

4. K. N. Sharma .. "Gadaya Ratna Mala" (Nand Kishore and Brothers, Benares).

5. D. Verma and G. Prasad .. Hindi Prose Selections (Rai Sahib Ram Dayal Agarwala, Allahabad).
6. Ayodhya Nath .. "Ujjwal Tare" (Indian Press, Allahabad).
7. Gokal Chandra Sharma "Nibandhadarsha" ahitya Bhavan, Ltd., Allahabad).
8. Prem Chand .. "Galpratna" (Saraswati Press, Benares).
9. Ram Chandra Verma .. "Rupak Ratnavali" (Sahitya Ratnamala Karyalaya, Benares).
9. Chandra Shekhar Shastri.. "Viropakhyan" (Sahitya Bhawan Limited, Allahabad).

N.B.—Students are expected to read at least two books recommended for supplementary reading in the above list.

#### Urdu.

##### Text prescribed :

1. قند اُردو Qand-i-Urdu by Jalaluddin Ahmad (Anwar-i-Ahmadi Press, Allahabad), (revised edition 1926).

or

Khyaban Urdu (Indian Publishing House, Allahabad).

or

گلستا ادب Guldasta-i-Adab (Indian Press, Allahabad).

2. Nisab-i-Jadid (Hissa Nazam), by Maulvi Mahdi Husain Nasiri (Anwar-i-Ahmadi Press, Allahabad).

3. جواهرات نثر Jawahirat-i-Nasr, by Makhmoor of Agra (Ram Prasad and Bros., Agra).

##### Grammar recommended :—

- (1) تسهیل القواعد حصہ سوم Tashil-ul-Qawaid, Part III (Indian Press, Allahabad),

or

- (2) عمدۃ القواعد Umdat-ul-Qawaid by Jalaluddin (Anwar-i-Ahmadi Press, Allahabad).

For Shikast the book recommended is—

Majmua-i-Khatt-i-Shikast, by M. A. Siddiqui (Indian Publishing House, Allahabad),

or

جدید خط شکست Jadid-i-Khat Shikast by Mohammad Zamin Ali (Indian Press, Allahabad),

or

دستور العدالت Dastur-ul-Adalat by Qazi Bashir-uddin Siddiqui (Meerut).

The following books are recommended for supplementary reading and they indicate the standard of the passages to be set as "unseen":—

- (1) توبة النصوح by Dr. Nazir Ahmad.
- (2) پریم بتیسی حصہ اول by Prem Chand.
- (3) Nisab-i-Jadid (Prose portion), by Maulvi Mahdi Husain Nasiri (Anwar-i-Ahmadi Press, Allahabad).

#### Bengali.

##### Prose.

Text prescribed :—

"Matriculation Bengali Selections", published by the Calcutta University (prose portion only). Third edition.

The following books are recommended for supplementary reading :—

1. Iswarchandra Vidyasagar—"Sakuntalar Patigriha Yatra".
2. Akshaykumar Dutt—"Santosh-o-Parisram".
3. Bhudeb Mukhopadhyaya—"Kajkara".
4. Gangaprasad Mukhopadhyaya—"Nitisiksha".
5. Jagdishchandra Basu—"Bhagirathir Utsa Sandhane".
6. Bhanga Gaurava, by R. B. Jaladhar Sen (Macmillan).

##### Poetry.

Text prescribed :—

"Katha o Kahini", by Rabindra Nath Tagore (excluding Avishar and Porishad, pages 26 to 43).

"Bhasha Bodh Vyakaran", by Nakuleshwara Vidyabhushan. Re. 1 (recommended).

#### Marathi.

*Paper I, Poetry.*—The following selections as published in the latest edition of "Navnit":—

- (१) वामन पंडिता चे स्फुट श्लोक, पानें (१३३-१४३)
- (२) मेरोपंत—कर्णे पर्वोत्तील कर्णार्जुन युद्धाच्या आर्या पानें (३३०-३४६)

*Paper II, Prose.*—मे (a novel), by Hari Narayan Apte.

Book recommended for rapid reading :—

महाराष्ट्र वाङ्मय प्रवेशिका, भाग १-२, by G. G. Kanitkar (Macmillan & Co.).

*Grammar.*—R. B. Joshi's Marathi Grammar "Praudhabodha". Recommended for the use of teachers—

1. Marathi Grammar, by M. K. Damle (published by the Inder Prakash Press, Bombay).
2. मराठी चो सनातन in two volumes, by G. G. Mujumdar, teacher, Sangli High School, Sangli.

#### Gujarati.

*Paper I, Prose.*—Gujarat-ni-June Vartāo, by Manilal Chhabaram Bhatt.

*Paper II, Poetry.*—"Kusummali", by N. B. Divatia.

For Grammar the following book is recommended :—

Madhyama Gujarati Vyakarana, by K. P. Trivedi (N. M. Tripathi, Bombay).

### B.—OPTIONAL SUBJECTS.

#### I.—CLASSICAL LANGUAGES.

There will be two papers, each of three hours, in each of these languages—the first paper will be in the Prescribed Texts and Grammar, and the second paper in Translation, Composition and Unseen.

#### SYLLABUS.

##### (a) Sanskrit.

*Paper I.*—(a) *Text-books.*

1. Sanskrit Manjari, by Pandit Nilkamal Bhattacharya (Nand Kishore and Bros., Benares) of which the following selections are prescribed :—

Numbers 2, 3, 4, 11, 12, 16—23, 25, 35, 43 and 45.

2. संस्कृत परिचय by M. M. Giridhara Sarma (Motilal Banarsidas, Lahore).

3. Sanskrit Pathavali for High School classes, Part I, by Dr. Babu Ram Saksena (National Press, Allahabad).

**NOTE.**—The students should be taught to understand the passages, give their context and substance, and to learn the analysis of compounds, sandhis and the prose order of the poetry pieces.

(b) *Grammar.*—Simple sandhis and simple samasas. Declension of nouns and pronouns of frequent occurrence. Conjugation in लट्, लोट्, विधिलिङ् and लृट् of verbs of frequent occurrence of all classes (गण) except those of अदादि, रुधादि, क्रधादि and जुहोत्यादि.

**NOTE.**—Questions on Grammar should be asked from the prescribed text-books and books recommended for Grammar and they should carry about one-third of the total marks of the paper.

Books recommended for Grammar :—

1. First and Second Book of Sanskrit, by Bhandarkar.
2. R. K. Banerjee's Sanskrit Grammar.
3. Sanskrit Teacher, by K. P. Trivedi.
4. Sanskrit Prathama Pustaka, by Professor Ram Bihari Lal, D. A.-V. College, Cawnpore.
5. Sanskrit Praveshika, by Pandit Raja Ram, Professor, D. A.-V. College, Lahore.

*Paper II.*—Translation, Composition and Unseen :—

- (a) Selected passages from books recommended for rapid reading and from others of equal difficulty for translation into the vernacular of the candidate ; and (b) translation of easy English or Hindi prose passage or sentences into Sanskrit.

Books recommended for rapid reading and for composition :—

- (1) सरल कथा तर्कज्ञान by Veda Vyas, M.A. (Messrs. Uttar Chand Kapur and Sons, Lahore).
- (2) कुटुम्ब संवय by वाचस्पति (Messrs. Frank Bros. & Co., Chandni Chawk, Dehli).
- (3) A Manual of Sanskrit Composition, by Lallaram Tewari (National Press, Allahabad).
- (4) प्रवेशिका संस्कृत रचनानुवाद शिक्षा, by महामहोपाध्याय पण्डित रघुनन्दन-त्रिपाठी साहित्याचार्य ।

*N.B.*—Sanskrit must be written in Devanagari character.

(b) Arabic.

*Prescribed course—*

*Paper I.*—(a) Prose and Poetry,

عربي هائي اسکول کورس

نثر

۱ — الحکایات من نفحة اليمون

۱ — قيل لما هرب موسى بن عمران

۲ — عن القاسم بن عيسى بن ائثم الى يستخدم ضيفه

۳ — قيل ان ملك الشام

- ٢ — قيل ان ملك الصين بلغه  
 ٥ — قيل ان الصحاح خرج يوما  
 ٦ — قيل ان بعض الحكماء لزم  
 ٧ — قيل دخل حسن بن الفضل  
 ٨ — قيل ان الهدد قال لسليمان  
 ٩ — قيل نزل رجل الاكاليين  
 ١٠ — قيل ان بهرام الملك خرج  
 ١١ — قيل ان المامون تكلم يوما  
 ١٢ — قيل كان رجل له غلام  
 ١٣ — دخل لص دار ممالك بن دينار  
 ١٤ — قال بعض الحكماء الفرس  
 ١٥ — قيل ان رجلا اتى سليمان  
 ١٦ — قيل اصطحب اسد و ثعلب  
 ١٧ — سال بعض الملوك وزيرة  
 ١٨ — قيل ان رجلا جلس يوما يا كل  
 ١٩ — ذكر صاحب حياة الحيوان  
 ٢٠ — قيل لقيس بن سعد هل رايت  
 ٢١ — قيل ان عليا رضى الله عنه  
 ٢٢ — قيل ان الرشيد جمع اربعة من اطباء

#### ٢ — الامثال من نفحة اليمن

100 mathals from the beginning.

#### ٣ — الاسفار من الف ليلة و ليلة

- ١ — السفر الثاني من اسفار السندى بك البحري \*  
 ٢ — السفر الثالث ايضا ايضا

#### ٤ — الفضائل والنقص

الباب الخامس من الجزو الاول من مجانى الادب \*

#### ٥ — اوصاف البلدان

- ١ — مكة المكرمة - من الرحلة الصحاوية  
 ٢ — الحرم المدني ايضا  
 ٣ — اصبهان من مجانى الادب  
 ٤ — بلخ ايضا  
 ٥ — بيت المقدس ايضا

٦ — بيروت	من مجاني الادب
٧ — تبت	ايضا
٨ — حلب	ايضا
٩ — دمشق	ايضا
١٠ — شيواز	ايضا
١١ — دلي	ايضا
١٢ — مشهد	ايضا
١٣ — الصين	ايضا
١٤ — عمان	ايضا
١٥ — مليبار	ايضا

## نظم

## ١ — من ديوان سيدنا علي بن ابي طالب

- ١ — الناس من جهة التمثال اكفاء
- ٢ — ليبيك ليبيك انت مولاه
- ٣ — امن بعد تكفين النبي و دفنه
- ٤ — احسين اني راعظ و مؤذب
- ٥ — تغطي عيوب المرء ثخرة ماله
- ٦ — و افضل قسم الله للموء عقله
- ٧ — ليس البلية في ايامنا عجبنا
- ٨ — كن ابن من شئت و اكتسب ان با
- ٩ — ايها الفاخر جهلاً بالذنب
- ١٠ — سليم العرض من حذر الجوابا
- ١١ — و ذي سفة يو اجهني بجهل
- ١٢ — اذا شئت ان تقلن فزرت متواتراً
- ١٣ — قد شاب راسي و راس الحص لم يشب
- ١٤ — كنا كزوج حمامة في ايكمة
- ١٥ — شيطان ان بكيت الدعاء عليهما
- ١٦ — انما الدنيا فداء ليس للدنيا ثبوت
- ١٧ — الم تو ان الدهر يوم وليلة
- ١٨ — قد كذبت ميتاً فصرت حيا
- ١٩ — تغرب عن الاوطان في طلب العلى
- ٢٠ — تمنى رجال ان اموت و ان امت
- ٢١ — الموت لا والداً يبقى ولا ولداً

- ٢٢ — و فى الجحيم قبل الموت موت لاهله  
 ٢٣ — لمن ساء نى دهر فقد سرنى دهر  
 ٢٤ — جميع فرائد الدنيا غرور  
 ٢٥ — تو مل فى الدنيا طويلا ولا تدرى  
 ٢٦ — كثير المال ليس له عوار  
 ٢٧ — العلم زين فكن للعلم مكتسبا  
 ٢٨ — لا تضع المعروف فى ساقط  
 ٢٩ — لا تجزعن اذا ذابتك ذائبة  
 ٣٠ — دح الحوص على الدنيا  
 ٣١ — لك الحمد يا ذا الجود والمجد والعلم  
 ٣٢ — لا تبخلن بدنيا وهى مقبلة  
 ٣٣ — جزى الله عنا الموت خيرا فانه  
 ٣٤ — رضىنا تسمه الجبار فينا  
 ٣٥ — فلا تنثرون القول فى غير وقته  
 ٣٦ — اخاف و ارجو عقوبه و عقابه  
 ٣٧ — قضى الله امرا و جف القلم  
 ٣٨ — تنزه عن مصاندة اللئام

#### ٢ — من ديوان ابي العتاهبه

- ١ — ان الطيب بطبه و دوائه  
 ٢ — الا نحن من دار القليل بقاؤها  
 ٣ — نصيب لنا دون التفكير يا دنيا  
 ٤ — لا عذر لى قد اتى مشيب  
 ٥ — نقد نعيم و جد الموت فى طلبى  
 ٦ — لك و الموت و ادنوا للخراب  
 ٧ — ما للمقابر لا تحيب  
 ٨ — الا كل ما هن آت قريب  
 ٩ — اين المفر من القضاء  
 ١٠ — اليس قريبا كل ما هو آت  
 ١١ — خذلى ان الهم قد يتفرج  
 ١٢ — لاح شيب الراس منى فتصم  
 ١٣ — الا اذننا كلها بائن  
 ١٤ — فما لك ليس يعمل فيك وعظ

## ۳ — من دیوان الحماسة

قال یزید بن الحكم يعط ابنه بدرا  
یا بدر والا مثال یضربها لدی اللب الحکیم

(b) *Grammar*.—1. Mabādi-ul Arabiyya مبادئ العربية by Shartūni, Urdu edition [edited by Maulvi Izzat Ullah (the Majidi Press, Cawnpore)].

2. الزنجاني فی الصرف

3. الضمیری فی النحو

N.B.—Questions on Grammar exclusively should be asked from the prescribed book as far as possible, and should carry about one-third of the total marks.

*Paper II*.—Translation, Composition and Unseen :—

(a) Selected passages for translation into Urdu.

(b) Translation of English prose into Arabic.

The following book is recommended for supplementary reading and it indicates the standard of the passages to be set as “unseen” :—

مدارج القراءة (Anwar-i-Ahmadi Press, Allahabad).

NOTE.—Arabic words must be written in Arabic character.

(c) Persian.

*Prescribed course—*

*Paper I*.—(a) *Text* :—

*Prose.*

1. *Gulistan* :—

( الف ) سبب تالیف کتاب - یکشب تامل ایام گذشته می کردم .... مانده بود  
که کتاب گلستان تمام شد -

( ب ) باب اول - در سیرت بادشاهان :—

( ۱ ) حکایت اول - بادشاه را شنیدم که بکشتن اسیر ... جز نکو گوید -

نصیحت بر طاق ایوان فریدون .... بر روی خاک -

( ۲ ) حکایت دوم - یکی از ملوک خراسان .... فلان نماند -

( ۳ ) حکایت سوم - ملکه زاده را شنیدم .... در بند اقامت دگر -

( ۴ ) حکایت چهارم - طائفه دزدان عرب .... بجای نیک مردان -

( ۵ ) حکایت پنجم - سرهنگ زاده را .... که آفتاب سپاه -

( ۶ ) حکایت ششم - یکی را از ملوک اعجم .... در دستي روزگار

- ( ۷ ) حکایت هفتم - بادشاه باغلام عجمی .... اعراف بهشت است -  
 ( ۸ ) حکایت هشتم - یکے از ملوک عجم .... حذر بکنید -  
 ( ۹ ) حکایت نهم - هرگز را گفتند .... چشم پلنگ -  
 ( ۱۰ ) حکایت دهم - ببالین تربت .... نهند آدمی -  
 ( ۱۱ ) حکایت یازدهم - درویش مسرتجرب .... مردم آزادی -  
 ( ۱۲ ) حکایت دوازدهم - یکے از ملوک .... مرده به -  
 ( ۱۳ ) حکایت سیزدهم - یکے را از ملوک شنیدم .... گرد آیند -  
 ( ۱۴ ) حکایت چهاردهم - یکے از بادشاهان .... در عالم -  
 ( ۱۵ ) حکایت پانزدهم - یکے از وزرا .... نیا زارد -  
 مثل سیاه گوش را .... ندیمان بگزار  
 ( ۱۶ ) حکایت شانزدهم - یکے از رفیقان .... سرراخ کژدم -  
 ( ۱۷ ) حکایت هفدهم - تیز چنده از روزندگان .... بی بی سنگ -  
 ( ۱۸ ) حکایت هجدهم - ملک زاده گنج .... نکو گذاشت -  
 ( ۱۹ ) حکایت نوزدهم - آورده اند که .... مرغ بسیدخ -  
 ( ۲۰ ) حکایت بیستم - عامل را دیدم .... مردم آزار -  
 باز آمدیم بهکایت .... لعنت پائدار -  
 ( ۲۱ ) حکایت بیست و یکم - مردم آزار .... مغزش برار -  
 ( ۲۲ ) حکایت بیست و دوم - یکے را از ملوک .... پاه پیل -  
 ( ۲۳ ) حکایت بیست و سوم - یکے از بندگان .... نشستنی -  
 ( ۲۴ ) حکایت بیست و چهارم - ملک زوزن .... اهل خرد -  
 ( ۲۵ ) حکایت بیست و پنجم - یکے از ملوک عرب .... آستان دارن -  
 ( ۲۶ ) حکایت بیست و ششم - ظالم را .... بهم برونند - لطیفه به تاج ....  
 بخواد رفت -  
 ( ۲۷ ) حکایت بیست و هفتم - یکے در صنعت .... نشاء نک -  
 ( ۲۸ ) حکایت بیست و هشتم - درویش مجنون .... دست بدست -  
 ( ۲۹ ) حکایت بیست و نهم - یکے از وزرا .... ملک بود -  
 ( ۳۰ ) حکایت سی ام - بادشاه بکشتن .... به خواست -  
 ( ۳۱ ) حکایت سی یکم - وزرا نوشین روان .... پروین -  
 ( ۳۲ ) حکایت سی و دوم - شیاد .... کسل کنند -  
 ( ۳۳ ) حکایت سی و سوم - یکے از پسران .... باطل نگوید -  
 ( ۳۴ ) حکایت سی و چهارم - باطائفه بزرگان .... کارها باشد -  
 ( ۳۵ ) حکایت سی و پنجم - دو برادر .... دو تا -  
 ( ۳۶ ) حکایت سی و ششم - کسی مژده .... چارانی نیست -  
 ( ۳۷ ) حکایت سی و هفتم - گروه حکما .... گناه است -

- ( ۳۸ ) حکایت چهلیم - اسکندر رومی .... پائدار -  
باب چهارم - در فوائد خاموشی  
( ۱ ) حکایت اول - یک از دوستان .... موشک کور -  
( ۲ ) حکایت دوم - بازار گانه .... شادی کنان -  
( ۳ ) حکایت سوم - جوانه خردمند .... دلیلش بیار -  
( ۴ ) حکایت پنجم - جالینوس .... ندانی -  
( ۵ ) حکایت ششم - سحبان .... ریس -  
( ۶ ) حکایت هفتم - یک را از حکما .... خبرش -  
( ۷ ) حکایت هشتم - تله چند .... یافت -  
( ۸ ) حکایت نهم - در عقد .... ارزن -  
( ۹ ) حکایت دهم - یک از شعرا .... درم چند -

اینچه .... مرید مانند (Instead of)

( این چه مرید مانند read )

- ( ۱۰ ) حکایت دوازدهم - خطیب .... عیب خویش -

دوم ذیقعدة from ( سفر انگلستان ) سفر نامه ناصح الدین شاه  
اینها می رقصیدند to روز دوشنبه

3. Anwar Suhaili Chapter I ملا حسین واعظ کاشفی by انوار سہیلی  
خود کرده را تدبیر نیست up to

Poetry.

۱ - بوستار

- باب اول - در عدل و راء و تدبیر جهانداران -  
( ۱ ) نگنجد کمرباه .... بنده حق گذار -  
( ۲ ) حکایت - یک دیدم .... پسند آیدش -  
( ۳ ) پند دادن کسره همزرا - شنیدم که .... باشی بس -  
( ۴ ) پند دادن خسرو شیرویه را - شنیدم که خسرو .... مردم درید -  
( ۵ ) حکایت - چه خوش .... بست بست -  
( ۶ ) حکایت - شنیدم که شاپور .... باده بست -  
( ۷ ) حکایت در تدبیر بادشاهان و تاخیر کردن در سیاست - ؛ دریاه ....

چندین ملک

omitted پشیمان شوي .... ملک را دو خورشيد Lines

( ۸ ) گفتار - نه بر حکم .... بر نکون -

( ۹ ) حکایت در معنی شفق بر رعیت - شنیدم که فرماندهی ....  
زمین -

( ۱۰ ) حکایت - شنیدم که جمشید .... در گردنت -

( ۱۱ ) حکایت - شنیدم که دارا .... کم بود -

( ۱۲ ) گفتار - تو که بشنوي .... خواهی بگو -

( ۱۳ ) حکایت - خب یافث .... داد خواست -

( ۱۴ ) حکایت - از بزرگان .... بن سعد راست

( ۱۵ ) حکایت - اباک مرحوم تکه بن زنگی رحمه الله تعالی - در  
اخبار .... داشتند -

( ۱۶ ) حکایت - شنیدم که بگریست .... نا کشتن -

( ۱۷ ) حکایت - خدا دوست نمایی .... بند و گوش -

( ۱۸ ) گفتار - مہا زو مژدی .... دو گذشت -

( ۱۹ ) حکایت در معنی رحمت بر فائقان در حال توانائی چنان تحم  
سالی .... در بوستان -

( ۲۰ ) حکایت - شبی دود .... سمن قدری -

( ۲۱ ) گفتار - خبر داری .... نگریست گشت -

( ۲۲ ) حکایت - شنیدم که در مرز .... ظلم جست -

( ۲۳ ) حکایت - یک بر سر شاخ .... ز سعدی شنو -

( ۲۴ ) صفت جمعیت اوقات درویش راضی - مگو جاه .... شناخت -

( ۲۵ ) حکایت - شنیدم که یکبار .... آید بگوش -

( ۲۶ ) در معنی زکوتری و بدکاری و عاقبت آن - نکوکار مردم .... به پیش

( ۲۷ ) حکایت - گریزی .... چشم دار -

( ۲۸ ) حکایت - حکایت کفند از یک .... قیامت بماند -

( ۲۹ ) حکایت - یک پند می داد .... لاغر - مع گفتار - الا .... عرض -

( ۳۰ ) حکایت در پس معنی - یک را حکایت .... برخاستست -

( ۳۱ ) گفتار - جهان اے پس .... گذاشتند -

( ۳۲ ) حکایت شنیدم که در مصر .... بالین گور -

( ۳۳ ) حکایت قزل ارسلان .... کس است -

( ۳۴ ) حکایت - چنین گفت .... بری -

( ۳۵ ) حکایت - چو انب ارسلان .... ده خداست -

( ۳۶ ) حکایت بزرگ جفا پیشه .... اشارت بس است -

omitted پست .... چوبام Line

( ۳۷ ) حکایت - شنیدم که از نیکمردی .... خاتمت .

( ۳۸ ) حکایت - یک مشت زن .... زر نداشت -

( ۳۹ ) حکایت - حکایت کنند از جفا .... مستجاب -

( ۴۰ ) گفتار - همی تا بر آید .... در حلقه کارزار -

( ۴۱ ) گفتار - اندر نواخت لشکریان - دلاور .... کارزار -

( ۴۲ ) گفتار - به پیکار .... مصافح نکشت -

( ۴۳ ) حکایت - چه خوش گفت .... غنیمت شمار -

omitted اگر چون ..... مر بر Line

( ۴۴ ) گفتار - دو تن پرور -

omitted زن .... نلمزن Line

( ۴۵ ) گفتار - میان دو بد خوا .... به آرام دل -

( ۴۶ ) گفتار - اندر ملاطفت دشمن از رو عاقبت اندیشی - چو شمشیر ....

شبیخون بی -

( ۴۷ ) گفتار - اندر حذر کردن از دشمنی که در طاقت آید - گرت خویش ....

پیش بر -

باب دوم در احسان

( ۱ ) اگر هوشمندی .... در میان -

( ۲ ) گفتار اندر نواختن یتیمان و رحمت بر حال ایشان - پدر مرده ....

سر بر قدم پدر -

( ۳ ) حکایت در ثمر فکو کاری - کس دید در خواب ... پیغمبران -

( ۴ ) حکایت در اخلاق پیغمبران - شنیدم که یک هفته .... یک زمان -

Lines (1) and (2) پرست .... به گفتا نگیرم

omitted حال .... بدانست

( ۵ ) گفتار اندر احسان با مردم نیک و بد - گوه بر سو .... خرد -

( ۶ ) حکایت عابد با شهاد شوخ دیده - زبان دانی .... سعدی بگوش -

omitted در نزد .... خود از کوه Line

( ۷ ) حکایت پدر مسک و پسر جواز مرد - یک رفعت .... حسد -

( ۸ ) مثل - بدختر چه خوش .... لاغر شوی -

( ۹ ) باز آمدیم به حکایت فرزند خلف .... بی -

( ۱۰ ) حکایت اندر راحت رسانیدن همسایگان - بزارید .... علیست -

( ۱۱ ) حکایت شنیدم که مرده .... به منزل -

( ۱۲ ) حکایت - به هنگ .... تمیز -

( ۱۳ ) حکایت کریم ننگدست با سائل - یک را کم .... چه ناک -

- ( ۱۴ ) حکایت - در معنی احسان - یکے در بیابان .... زبردست -
- ( ۱۵ ) حکایت - بنالید درویشے .... زیو شد -
- ( ۱۶ ) حکایت یکے سپرت .... کسی ست -
- ( ۱۷ ) گفتار اندر جوانمردے و ثمره آن - بخشش ای پسر .... دوست -
- ( ۱۸ ) حکایت در معنی صید کردن دلها با احسان - برة در یکے .... در روز -
- ( ۱۹ ) حکایت درویش با روباه - یکے ووبهی .... بخلق خداے -
- ( ۲۰ ) حکایت عابد بخیل - شنیدم که مردیست .... سست -
- ( ۲۱ ) حکایت حاتم طائی و صفت جوانمردی وی - شنیدم در ایام ....  
ماجرای شنو -
- ( ۲۲ ) حکایت در آزمودن بادشاه یدن حاتم را بازاد مردی ندانم که گفت ....  
همو هند -
- ( ۲۳ ) حکایت در آزاد مردی حاتم و ذکر بادشاه اسلام - زبنگاه حاتم ....  
ز سعدی سخن -
- ( ۲۴ ) حکایت در علم بادشاهان - یکے را خرے .... من اسما -
- Line omitted زن ..... یکے گفت
- ( ۲۵ ) حکایت توانگر سقله و درویش صاحب دل - شنیدم که مغرورے .... و  
زان به آز -
- ( ۲۶ ) گفتار - الاگر طلبگار .... هدف -
- ( ۲۷ ) حکایت - یکے را پسر .... خارها -
- ( ۲۸ ) حکایت - زجاج ملکزاده .... ظریف -
- ( ۲۹ ) حکایت احسان اندک و ثمره آن بے نهایت - جوانی بدانگی ....  
ندانندم -
- ( ۳۰ ) حکایت در معنی ثمره نیکو کاری - کسی دید .... سایه در -
- ( ۳۱ ) گفتار اندر هیبت ملوک و سیاست - به گفتیم در باب .... و ناک -
- ( ۳۲ ) گفتار در معنی احسان با کسی که سزاوار نباشد - شنیدم که مردے  
.... زاهر اس -
- ( ۳۳ ) گفتار - چه خوش گفت .... تدبیر راے -  
باب ششم در قناعت  
خدا را ندانست .... تیرش خوری -  
باب هفتم در تربیت
- ( ۱ ) سخن در - بندگان کسی تا گفتار اندر فضیلت خاموشی .... سوختن -
- ( ۲ ) حکایت در حفظ اسرار - نگش با غلامان .... دم مؤن -
- ( ۳ ) حکایت - سلامت جاهل در حجاب خاموشی - یکے خوب خلاق و ....  
مباش -

( ۴ ) حکایت - یکے ناسزا .... مغزم بوند -

( ۵ ) حکایت - عضد را .... مشغول باش -

باب هشتم در شکر

( ۱ ) حکایت جوان سر .... بگوش مع گفتار اندر صنع باری .... سپاس -

( ۲ ) حکایت - نبرد از مائه .... به هیچ مع گفتار اندر نظر .... مشرعی -

باب نهم در توبه

( ۱ ) بیا اینک عمرت .... فرصت شمار -

( ۲ ) حکایت - شبی در جوانی .... بگور -

( ۳ ) حکایت - کهن سالی .... روزگار -

( ۴ ) گفتار - جوانا ره .... بخیز -

باب دهم در مناجات

بیا تا بر آریم .... نیند از دم

2. Ā'ina-i-Sikandari, by Khusraw خسرو

(a) Ode طرب نامه زندگانی بود up to گم آسایشه خواهی از روزگار

(b) Ode که خواهد شدن منزل دیگر upto اگر دانشه داری اے فیک راے

3. beginning with the following lines :- رباعیات عمر خیام

( ۱ ) عشاق بدرگهت اسپرند بیا

( ۲ ) مرد آن نبرد که خلق خوارند او را

( ۳ ) خرم بقو داشتیم دل پر غم را

( ۴ ) عاقل بچه امید درین شوم سراے

( ۵ ) اے خواجه یکے کام روا کن ما را

( ۶ ) اے دل ز زمانه رسم احسان مطلب

( ۷ ) چوں کار نه بر مراد ما خواهد رفت

( ۸ ) هر کو ورقه ز عقل در دل بنگاشت

( ۹ ) امروز ترا دسترس فردا نیست

( ۱۰ ) سر از همه ناکسان نهان باید داشت

( ۱۱ ) هر دل که درو مهر و محبت بسرشت

( ۱۲ ) هر که که غم ملایم دل شونت

( ۱۳ ) در چشم مستحقان چه زیباو چه زشت

( ۱۴ ) بسیار بگشتیم بگرد درو دشت - اندر همه عالم

( ۱۵ ) ایضا یک کار من الخ

( ۱۶ ) هر سبزه که بکنار جوئے رستست

( ۱۷ ) آن به که درین زمانه کم گیری دوست

( ۱۸ ) چندین غم مال و حسرت دنیا چیست

( ۱۹ ) چوں مردن تو مردن یکبارگی است

- ( ۲۰ ) هشداد که روزگار شور انگیز است  
 ( ۲۱ ) بادشمن و دوست فعل نیکو نیکوست  
 ( ۲۲ ) اے دل چو نصیب تو ہمہ خون شد نیست  
 ( ۲۳ ) بیتخانہ و کعبہ خانہ بندگی است  
 ( ۲۴ ) گل گفت بہ از لقاے من رونے نیست

(b) *Grammar*.—Candidates are expected to know Etymology, Syntax and the commoner figures of speech. The following books are recommended :—

قواعد فارسیء عملی by Maulvi Ishaq Ali (Indian Press, Allahabad) or جامع القواعد by Azad (R. S. Gulab Singh and Sons, Lahore) or مصباح القواعد by M. Muhiuddin (Anwar-i-Ahmadi Press, Allahabad).

*Paper II*.—Translation, Composition and Unseen :—

(a) Selected passages for translation into Urdu; (b) an easy composition exercise in Persian; and (c) translation of English prose into Persian.

The following books are recommended for supplementary reading and they indicate the standard of the passages to be set as "unseen":—

- (1) عیار دانش
- (2) گلدستہ دانش (Anwar-i-Ahmadi Press, Allahabad).
- (3) فارسی جدید حصہ دوم by Maulvi Muhammad Ali Irani.
- (4) ادبیات عجم حصہ اول by M. Abid Hasan Faridi (Sri Ram Mehra and Company, Agra).

Students who offer Persian are required to have such a knowledge of the etymology of the Arabic language as will enable them to explain all Arabic words and phrases which may occur in the text-books and in the books recommended for rapid reading in Persian.

NOTE.—Persian words must be written in Persian character.

(d) *Latin*.

*Paper I*.—(a) Prescribed Prose and Poetry.

*Text-books*—

1. Caesar : De Bello Gallico, Book I.
2. Livy : Hannibalian War, Selections from Books XXI and XXII (Macmillan).
3. Virgil : Æneid, III—Georgics IV.

(b) *Grammar*.—Gildersleeve's Latin Grammar or Allen's Latin Grammar is recommended.

N.B.—Questions on Grammar exclusively should be asked from the prescribed books as far as possible, and should carry about one-third of the total marks.

*Paper II.*—Translation, Composition and Unseen :—

Composition will include translation into Latin of easy English sentences and also of a simple passage of continuous English Prose.

Book prescribed—

Junior Latin Composition, by J. Mathewson Milne (Harrap and Co.).

## II.—COMMERCE.

The examination will consist of two papers, each of three hours—

(a) one paper on Business or Commercial Practice and (b) one paper on either (i) Typewriting or (ii) Book-keeping.

The following is the syllabus in each subject :—

### Business or Commercial Practice.

Office routine. Drafting simple business and official letters, preparation of telegrams and cablegrams, including a knowledge of simple codes. Docketing, filing, copying and despatch of letters. Ordinary postal regulations, use of postal forms such as Money Order, V.-P. P., Acknowledgment, Registration and insurance forms. Post Office Savings Bank Accounts. Telephone. Simple duplicating and other labour-saving appliances.

Meaning of ordinary commercial terms and abbreviations. Preparation of simple commercial documents such as indents, invoices, bills of exchange, promissory notes, statements of account. Nature and use of Bills of Lading and railway receipts. Simple banking transactions, involving the nature and use of cheques, deposit slips and pass books.

Books recommended :—

1. Extracts from Business Methods and Correspondence, by Arthur Fieldhouse.
2. Commercial Practice, by Roop Ram Gupta and K. L. Govil, Part I (Messrs. Gautama Bros. & Co., Cawnpore).

### Typewriting.

There will be no practical examination on the typewriter, but only a theory paper of two hours' duration involving questions on—

\*(a) the mechanical construction of the typewriter ;

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\* Questions on the mechanism of the typewriter will be of a general nature, so that students who are acquainted with the mechanism of any of the more popular typewriting machines will be able to answer the questions (*vide* G. L. no. B-2773/VI—3, dated September 5, 1924, from the Secretary of the Board).

- (b) care of the machine ;
- (c) display of matter, including headings and titles ; centering ; contractions and abbreviations ; hyphenation ; punctuation ; stencil cutting ; adaptation of one or more characters to represent characters not given on the keyboard ; corrections ; erasures.

There will also be a second paper of one hour's duration, consisting of type-copying of three manuscripts.

Books recommended—

1. Pitman's or Remington's Typewriting Manual.
2. Modern Theory and Practice of Typewriting, Parts I and II, by S. R. Gupta and K. L. Agarwala (Gupta Brothers and Company, Khurja).

#### Book-keeping.

Elementary theory of double entry book-keeping. Preparation and keeping of the Cash Book, Bought and Sold Books, Returns Books, Bills Receivable and Bills Payable Books, Journal and Ledger ; recording therein simple transactions involving purchases and sales ; bills receivable and payable ; real, personal and nominal accounts such as rent, salaries, interest, discounts, bad debts and depreciation. Drawing up the Trial Balance. Closing the Ledger, and preparing Trading and Profit and Loss Accounts and Balance Sheet. Simple banking transactions involving the nature and use of cheques, deposit slips and pass book, and preparation of Bank Reconciliation Statements. The nature and use of Bills of Exchange and Promissory Notes. Petty Cash and Imprest Systems.

Book recommended—

Elementary Book-keeping, by Arthur Fieldhouse (Simpkin, Marshall and Co., Limited, London, E. C., 4).

### III.—SCIENCE (PHYSICS AND CHEMISTRY).

The examination will consist of two papers—one in Physics and one in Chemistry, each of three hours.

#### Physics.

##### SYLLABUS.

Definition of Physics, measurements of length, area, volume, mass and weight. The balance. Density, specific gravity. Principle of Archimedes. The three states of matter. Pressure of air, simple barometer.

*Heat.*—Expansion of solids, liquids and gases, temperature, thermometers, maximum and minimum thermometers, clinical thermometer, melting and boiling points, conduction, convection and radiation, thermos-flask. Unit of heat, specific heat, change of state, latent heat. Easy calculations.

*Light.*—Rectilineal propagation of light. Reflection, refraction, plane, concave, convex mirrors, concave and convex lenses and prisms. Position of object and image with easy calculations. The camera. Dispersion.

*Magnetism.*—Attraction and repulsion, magnetization, terrestrial magnetism, magnetic meridian. The compass.

*Electricity.*—Electrification by friction. Properties of a charged body. Conductors and insulators. The electroscope. Induction. The electrophorus. A simple cell, simple forms of primary cells, arrangement of cells in series and parallel, magnetic and heating effect of a current. The simple galvanoscope, simple explanation of the telegraph, the electric bell, electric light.

*Sound.* (Treatment to be simple and non-mathematical)—Waves on water surface, wave length, frequency, amplitude, transmission of sound. Velocity of sound in air and in water. The gramophone.

#### Practical work.

The following list of experiments indicates the minimum amount of practical work required to be performed by students. Other experiments of equal educational value may be substituted. The experiments should be performed individually as far as can be arranged. The teaching of theory should be fully illustrated by experiments and demonstrations are to be considered an essential part of the teacher's work.

NOTE.—A chart giving a list of the experiments to be performed and the date on which each student completes each experiment should be maintained and hung in the laboratory at each school recognized in Science (*vide* G. L. no. B/3149—3300/V—36, dated December 21, 1925, from the Secretary of the Board).

*General.*—Determination of the relative density of—

- (a) bodies which float in water ;
- (b) bodies which sink in water ;
- (c) liquids.

Use of the calipers.

Determination of the radius of a wire by Archimedes' principle.

Determination of the internal radius of a narrow tube.

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Principle of moments.

*Light*.—Reflection at a plane mirror.

Focal length of a concave mirror.

Refraction through a prism.

Refractive index of glass and water.

Focal length of a convex lens.

*Heat*.—Cooling curve of water and wax or naphthalene.

Determination of the water equivalent of a calorimeter.

Determination of Specific Heat.

Determination of the Latent Heat of Ice.

Determination of the Latent Heat of Steam.

*Magnetism*.—Mapping out lines of force by a small magnet.

Determination of the direction of the Magnetic meridian.

*Electricity*.—Charging an electroscope by Conduction and Induction.

The magnetic effect of a current on a magnetic needle.

The electro-magnet.

Books recommended :—

1. Experimental Science for Indian Schools, by Gregory and Hodges (Macmillan). Rs. 3.

2. An Oxford High School Physics, by A. D. Joshi (Oxford University Press). Rs. 3.

The following books on Physics are recommended for teachers' reference library :—

1. Every-day Physics, by H. E. Hadley (Macmillan & Co.). Rs. 4, or

An Introduction to Physical Science, by Ivor B. Hart (Oxford University Press). Rs. 2.

2. A Class Book of Physics, by R. A. Gregory and H. E. Hadley (Macmillan & Co.). Rs. 3-12.

3. A Course of Physics, by Charles H. Draper (Blackie & Sons.) Rs. 3-12.

4. An Elementary Physics, by K. C. Bhattacharya (Indian Press, Allahabad). Rs. 2.

5. Matriculation Physics, Heat, Light and Sound (University Tutorial Press).

## Chemistry.

## Definition of Chemistry.

Common properties of matter : hardness, porosity, brittleness, solid, liquid and gaseous states. Change of state. Melting and boiling points.

Crystalline shape, effect of heat on common things.

Solution in water. The above to be studied with  $\text{NaCl}$ ,  $\text{KNO}_3$ ,  $\text{CaCO}_3$ ,  $\text{Na}_2\text{CO}_3$ ,  $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ ,  $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$ ,  $\text{ZnSO}_4 \cdot 7\text{H}_2\text{O}$ ,  $\text{Fe}$ ,  $\text{Zn}$ ,  $\text{Sn}$ ,  $\text{Mg}$ ,  $\text{Pb}$ ,  $\text{Hg}$ ,  $\text{P}$ ,  $\text{S}$ , Shellac and linseed oil.

Solution, melting, evaporation, distillation, filtration, solution in water and alcohol. Water of crystallization. Slow and rapid evaporation, saturated solutions. Crystallization studied from solutions in water and of melted sulphur. Distillation of water, mixtures, immiscible liquids. Elementary and compound substances. Non-metals and metals. Chemical symbols. Chemical action, the laws of definite proportion, atoms, molecules, atomic and molecular weights, valency, relation between equivalent and atomic weights. Simple formulæ and equations.

Study of air—Rusting of metals, oxidation, active and inactive gases in air. Burning of phosphorus. Meaning of combustion, slow and rapid combustion studied with iron, magnesium, and phosphorus.

Oxygen gas.; prepared from oxide of mercury and potassium chlorate. Important properties of oxygen gas.

Acidic and basic oxides, acids, bases and salts.

Preparation and properties of the following :—

Hydrogen, Nitrogen, Ammonia, Chlorine, Hydrochloric acid, Nitric acid, Carbon dioxide.

Carbon—Properties and varieties.

Action of carbon dioxide on animal and plant life.

Sulphur—Properties and varieties.

Preparation and properties of sulphur dioxide and sulphuric acid, their preparation treated in a very elementary manner—sulphur dioxide by burning sulphur in air and by the action of hydrochloric acid on calcium sulphite, and sulphuric acid by the action of nitric acid on sulphur dioxide and water.

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Study of Water—Action of steam on red-hot iron filings.

Action of Sodium on water. Action of magnesium on steam.

### Electrolysis of water.

NOTES.—1. The detailed course given below indicates the minimum amount of practical work required to be performed by students and suggests a method of treatment of the syllabus for the guidance of teachers. They may substitute other experiments of equal educational value. Practical work should be co-ordinated with the theoretical work and follow it consecutively, as far as possible. The practical experiment should be performed individually so far as can be arranged.

2. A chart giving a list of the experiments to be performed and the date on which each student completes each experiment should be maintained and hung in the laboratory of each school recognized in Science (*vide* G. L. no. B/3149—3300/V—36, dated December 21, 1925, from the Secretary of the Board.)

The use of stencils in answering papers in Science is not allowed.

(Classes IX and X.)

Classes IX and X will have 6 periods of Science per week—for at least 27 working weeks ; this gives a total of 162 periods in class IX :—

Subject.	Detailed syllabus.	Minimum list of experiments which should be done by the pupils individually.
Chemistry ..	<p>Effect of dissolved substances on boiling point.</p> <p>Distillation. Purification of water.</p> <p>Elements and compounds.</p> <p>Metals and non-metals, properties :—</p> <p><i>The atmosphere.</i> Combustion, active and inactive air.</p> <p>Rusting ..</p> <p>Increase in mass in rusting and burning.</p> <p>Explanation of above. Introduction of terms "Oxygen" and "Nitrogen."</p>	<p>To find B. P. of solutions of calcium chloride. Solution of different strengths.</p> <p>To bend tubes, bore corks, set up apparatus for distillation and find B. P. before and after distillation.</p> <p>To examine the element—sulphur, copper, lead, mercury, zinc. To examine the compounds, ferrous sulphate, copper sulphate, lead oxide, mercury oxide and regain the elements, where possible.</p> <p>Burning a candle in a bell jar. Repeat with sulphur, phosphorous. To measure the proportion of air used up when a substance burns in air.</p> <p>To show iron will not rust in dry air. To measure the air used up when iron rusts in air.</p> <p>To show increase in mass when magnesium and iron burn in air and when iron rusts in air—when a candle burns in air.</p>

Subject.	Detailed syllabus.	Minimum list of experiments which should be done by the pupils individually.
	<i>Oxygen</i> .. ..	Preparation from mercuric oxide and potassium chlorate in small quantities and on large scale from manganese dioxide and potassium chlorate, its properties.  To show loss in mass when potassium chlorate is heated.
	Metals and non-metals. <i>Oxides.</i> <i>Nitrogen.</i> Its use in the atmosphere.	Their basic and acidic properties.  Properties, to find accurately percentage of nitrogen in air by pyrogallic acid (Lecture room.)
	<i>Water</i> not an element ..	Action of sodium on water. Action of magnesium on boiling water. Action of steam on iron (lecture room). Examination of oxide of iron formed. Increase in mass. Comparison with iron rust.
	<i>Résumé</i> of above. Introduction of the term "Hydrogen." Preparation of hydrogen and its properties.	From zinc and sulphuric acid.  What happens to the zinc. What happens when hydrogen burns in air. Explosion of hydrogen with air.  Electrolysis of water and its composition by volume. Action of hydrogen on the oxides of copper and iron when heated. (Lecture room).
	Carbon .. ..	Properties and varieties.
	Demonstration lesson ..	Formation when carbon or carbonaceous matter burns in air.
	Carbonic acid gas. Chalk.	Effects of acids on chalk. Examination of the gas, properties of gas obtained by the effect of strongly heating chalk. Examination of lime, difference between properties of chalk and lime, loss in mass on heating chalk.
	<i>Résumé</i> of above. Animal and plant life.	Formation of oxygen by plants (lecture room).
	Chlorine gas ..	Preparation from manganese dioxide and hydrochloric acid. Its properties.
	Hydrochloric acid gas ..	Preparation from sodium chloride and sulphuric acid. Its properties.
	Ammonia gas ..	Preparation from ammonium chloride and quicklime. Its properties.
	Sulphur .. ..	Effect of heat.

The books *recommended* for use in Chemistry are—

1. Gregory and Hodges : Experimental Science for Indian Schools (Macmillan).
2. Wilson and Hadley : A School Chemistry for India (Oxford University Press).
3. J. W. Mellor : Elementary Inorganic Chemistry (Longmans, Green and Company), 1930.
4. An Elementary Chemistry for Indian Schools, Parts I and II, by K. C. Bhattacharya (Indian Press, Allahabad), 1929.

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#### IV.—AGRICULTURE.

The examination will consist of two papers of three hours each.

The first paper will be on the subject-matter in the syllabus up to and including sub-section (5)—Tillage ; and the second paper on the remaining portion.

#### SYLLABUS.

(1) *Climatology*.—Weather and seasons in the country and in the provinces.

(2) *Soils*.—Soil-forming processes.

Classification of soils on the basis of size of soil particles :—

Gravel (kankar).

Sand (bhur).

Sandy loam (retili domat).

Loam (Domat).

Clay loam (matyar domat).

Clay (matyar).

*Mechanical analysis of soils*.—Determination of stones, gravels, sand and clay by simple sedimentation.

*Texture of soils*.—Arrangement and size of particles of soil ; Specific gravity ; Pore space ; Surfaces exposed ; Friability.

*Organic matter in the soils*.—Its sources and distribution and maintenance. Its effect on soil.

*Soil water*.—Its forms, its movements.

*Control of soil moisture*.—Run-off losses ; Percolation ; Evaporation. Methods of checking the same.

*Soil heat.*—Relation of heat to germination and growth. Sources of soil heat. Factors affecting soil temperature. Effect of colour radiation, convection and conduction.

(3) *Irrigation and Drainage*—

*Water requirements of plants.*—Factors affecting transpiration. Wilting point. Conserving of moisture. Effect of excessive moisture.

*Sources of water for irrigation.*—Rain, its annual and seasonal variations ; wells, rivers, canals, tanks and bandhis.

*Types of simple water-lifts.*—Persian wheel, chain pump, charsa, baldeo balti, dhekli.

*Distribution of water.*—Flow system ; Pucca and kachchachannels ; Planning and laying out of irrigation channels.

*Drainage.*—Earth bunds. Conditions making drainage necessary. Possible relation between irrigation and drainage.

(4) *Manures and manuring.*—Farm-yard manure. Oil-cakes, green manuring, poudrette, preservation, application ; Chemical fertilizers.

(5) *Tillage.*—Objects of tillage and description of principal implements of tillage :—

- |                                    |  |                 |
|------------------------------------|--|-----------------|
| (a) Ploughs.                       |  | (c) Patela.     |
| (b) Cultivators including harrows. |  | (d) Hand tools. |

(6) *The Plant.*—General description of a plant and its parts and the functions of each. Plant growth, substances necessary for plant growth, sources of those substances, storage and movements of food materials. Necessary conditions for the normal growth of a plant—air, heat, light and moisture.

(7) *Farm Crops.*—Preliminary cultivation, sowing, weeding, irrigation, manurial requirements, harvesting, storage, and marketing of the following crops :—

Wheat, gram, rice, maize, jawar, arhar, cotton, mustard, saui, ambadi, potatoes, sugarcane, and vegetables.

(8) *Farm Animals.*—Buffaloes, cows and oxen, goats ; their care and maintenance.

(9) *Patwari Papers.*—Limited to village maps, khasra, khatauni and khewat.

Candidates are required to maintain note-books of all work done, both theoretical and practical. These note-books should be inspected periodically and initialled by the teachers. They may be called for at the time of the examination.

Candidates will undergo the following course of practical work in connexion with the above syllabus.

1. Each student is required to keep records of the following facts noted in the school observatory :—

- (a) Rainfall.
- (b) Maximum and minimum temperature of air in shade.
- (c) Wind directions.
- (d) The time of occurrence of frost, fog, hail, dust-storm.
- (e) Afternoon temperature of black soil, light coloured soil, rolled soil, and mulched soil.

2. Separation of stones, gravel, and fine soil by sieve. Weight of different soils in unit volume. Organic matter in soil and sub-soil, its power of absorbing moisture. Amount of percolation of water in a unit of time through sand, clay and loam. Classification of soils as clay, loam, sandy by sight and touch.

3. Rough estimates of amount of water discharged in one hour by the different water-lifts in use. Amount of water discharged on fields by pucca, kachcha, and puddled channels.

4. Results of applications of green manuring, farmyard manure, oil-cakes, ground bones, bone ash, potash, nitrate, applied to school garden plots.

5. Use of farm implements.

6. Drawings of the following plants :—

Juar, cotton, wheat, gram, potato and okra (bhindi).

7. Records of notes of cultivation of at least one kharif crop, one rabi crop, one garden crop, from the time of preparation of seed-bed to marketing, actually observed by the candidate.

8. Description of local breeds of farm animals. Recognition of different feeding stuffs.

General lay-out of farm buildings.

*Books recommended—*

- 1. Meston Readers, Parts 1 to 3, by K. S. M. A. Quyum.
- 2. Krishi Shastra or Ilm Zarayat, by Tej Shanker Kochak.

3. Notes on Poultry-keeping in India, by Mrs. A. K. Fawkes.
4. Tisdale's Books on Dairying.
5. Monthly Journals, Leaflets, and Bulletins issued by the United Provinces Agricultural Department.
6. Lessons in Indian Agriculture, by D. Clouston (Macmillan & Co., Ltd.).
7. Rahbar Zarait, by T. S. Kochak, published by the author. Rs. 2-8.
8. Krishi Vigyan, Part I, by Sita Prasad Tiwari.

#### V.—DRAWING.

The examination will consist of two papers of three hours each : the first paper on Free Arm Drawing and the second paper on Geometrical Drawing.

##### SYLLABUS.

*Free Arm.*—This should be in Pastel, and should comprise common objects from nature.

*The Round.*—Such as Orange, Mango, Apple, Tomato, Lichi, Melon, Peach ; Hockey and other Balls, Nutmeg, Walnut, etc.

*The Cylindrical.*—Such as Flower-pot, Household Utensils, Degchies, Cups, Saucers, Surahi, Bowls, Tumblers, Lotas, Bottles of kinds, Inkpots, Gloy Bottle, Paper-weight, Candle-stick, etc.

*The Rectilinear.*—Open Book, Cigar and Cigarette Boxes, Match Box, Attaché Case, Cash Box, Flags, etc.

*Miscellaneous.*—Hockey Sticks, Cricket Bat, Tennis Racket, Mallet, Hammer, Screw Driver, Chisels, Padlock, Key, Scissors, Knives, Hatchet, etc.

*Nature Study.*—Simple flowers and leaves of all sorts. Butterflies, Beetles, etc.

The above outline which is but suggestive should be in Pastel on Tinted Paper and will involve instruction in the art of Blending Colours, Colour Harmonies, Colour Schemes and Shadows.

##### *Text-books recommended—*

Pastel work for the standards, 3 volumes, by A. G. Tomkins (Messrs. Isaac Pitman & Sons, London, Bath and New York). Rs. 3 each volume.

*Materials.*—Pastels, Paper, etc. (Reeves), obtainable from Messrs. J. N. Navalakhi & Co., Kalbadevi Road, Bombay.

Pastels, Agra Pencil Factory, Tajganj, Agra.

*Geometrical Drawing.*—(1) The theory and use of instruments, especially of the protractor and Marquise scale.

(2) Plain block-letter writing.

(3) The whole of practical plane geometry.

(4) Drawing of scales, viz., scale of chords ; diagonal scale ; plane scale ; comparative scales (to be done in ink).

*Text-books recommended—*

1. Geometry, Plane and Solid (Morris), (Longmans, Green & Co., Bombay and London).

2. New School of Art Geometry (Gill), (George Gill & Co., Minerva House, Warwick Lane, E. C., London).

3. Roorkee Drawing Manual (Veale), (Roorkee Thomason College Book Dépôt, Roorkee).

*Materials.*—School Geometry set (Reeves).

Recommended for reference by teachers :—

Modern Art Geometry for Schools and Colleges, by R. C. Singhal, N. R. E. C. Intermediate College, Khurja.

## VI.—MANUAL TRAINING.

The examination will consist of one paper of three hours in Drawing and a practical examination of four hours in Woodwork.

### SYLLABUS.

(1) *Woodwork*—

(a) A series of models graduated in respect of the tool manipulations involved, to be made in wood, from working drawings (drawn in plan and elevations, conventional isometric projection) or from a given pattern in wood ; the construction of the models to involve the use of one or more of the following tools :—Jack Plane, Try Square, Marking Gauge, Marking Knife, Smoothing Plane, Tenon Saw, Bevel, Screw Driver, Firmer Chisel, Hammer, Mallet, Bradawl, Nail Punch, Compass, Firmer Gouge, Gimlet, Frame Saw, Spoke Shave, Brace and Bit, File.

The following joints at least should be included amongst the models :—

Half-lap, Housing, Mortise and Tenon, Half-lap Dovetail, Box Dovetail, Edge-dovetail, Bridle.

(b) The care and maintenance in good working condition of the above-mentioned tools, excluding saw setting and sharpening.

(2) *Drawing*—

Drawing in plan and elevations of all models in the course and in conventional isometric projection of those of a rectangular shape.

NOTES.—1. A scheme drawn up on the above lines is given below. Teachers need not keep strictly to the particular model mentioned in this scheme, but if any changes in the models are made these should not involve changes in the new tool manipulations employed. The course should, if possible, be commenced in class VII.

2. Attention is invited to the suggestions for the teaching of Manual Training contained in Director of Public Instruction's circular no. 2 of 1917-18..

\*Books recommended for the *use of teachers*—

1. The Teacher's handbook of Sloyd, by O. Salloman. (George Phillip & Sons.) 6s.
2. Manual Instruction ; Woodwork, by J. C. Pearson. (George Phillip & Sons.) 6s.
3. McDougall's Light Woodwork, by David Thomas. (McDougall's Educational Company, London.) 1s.
4. The Scholar's Woodwork Class-book, by T. W. Berry. (Cassell & Co., London.) 1s.
5. Practical Drawing, by T. S. Usherwood. (Macmillan & Co.) 2s.
6. Educational Handwork—Junior Course, by J. L. Martin and C. V. Manley. (Blackie & Sons.) 1s. 6d.
7. Educational Handwork—Intermediate Course, J. L. Martin and C. V. Manley. (Blackie & Sons.) 1s. 6d.
8. Educational Handwork or Manual Training, by A. H. Jenkins (University Tutorial Press, Burlington House, Cambridge).
9. The "Self-help" Course of Woodwork Exercise, by E. J. Andrews. (Charles and Dible, 10, Paternoster Square, London.) 2s. net.
10. Handicraft in Wood and Metal, Shirley and Hooper (Batsford). Rs. 9.

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\* In connexion with the books recommended for the use of teachers in this Prospectus it should be noted that there is in addition a number of books approved for the use of teachers generally (*vide* list of books approved for the use of teachers of Anglo-Vernacular and Vernacular Schools, dated July 31, 1916, and its supplements issued annually).

## VII.—A MODERN EUROPEAN LANGUAGE.

### French.

There will be two papers of three hours each. The first paper will consist of passages for translation from the Prescribed Text-books, questions on the Prescribed Text-books, and questions on Grammar. The second paper will consist of Unseen passages and idiomatic phrases for translation from French into English and *vice versa*.

#### *Books prescribed—*

1. *Ed. About* :—Le Nez d'un Notaire. Macmillan's Edition (Siepmann's Series).
2. *Du Camp* :—La Dette de Jeu (Cambridge University Press).
3. *Daudet* :—Letters de mon Moulin [Edited by Bradley and Rieu (Clarendon Press)].
4. French Poetry for advanced students, by A. Watson Bain (Macmillan & Co.), of which poems numbered 1, 9, 11, 12, 13, 14, 16, 31, 48 and 56 are prescribed.

#### *Grammar recommended—*

French Grammar (Sonnenschein's Parallel Grammar Series) or Heath's Modern French Grammar (Harrap).

NOTE.—The *viva voce* examination has been dropped for the present.

## VIII.—DOMESTIC SCIENCE.

The examination will consist of two papers of three hours each. The first paper will contain questions on Physiology, Hygiene, Household Management, and Home-nursing. The second paper will consist of the practical examination in Sewing to be held at the same time as the examination in written work. There will also be an oral test in First Aid and Home-nursing, and a practical test in Cooking.

#### Marks.

First paper	..	..	..	..	50
Sewing	..	..	..	..	20
First Aid and practical work in Home-nursing	..				30

Candidates should be required to gain pass marks separately in—

- (a) First paper (Physiology, Hygiene, Household management and Home-nursing).
- (b) Sewing; First Aid with practical work in home-nursing.

## SYLLABUS.

As a basis for the teaching of Hygiene and Home-nursing there should be a preliminary simple treatment of the following topics in Elementary Physiology :—

The human skeleton, the organs of digestion, the circulation of the blood, the nervous system, respiration.

*I.—Hygiene.*

NOTE.—Great importance should be attached to practical work wherever the subject admits of this.

*Air.*—Composition of air, importance of pure air, impurities of air, diseases caused by impure air, ventilation.

*Water.*—Composition of water ; quantity of water required ; source of water-supply, springs, deep wells, surface wells, rivers, tanks ; how water is polluted ; how to prevent pollution of water ; how to purify water ; boiling and filtering.

*Food.*—Composition of food ; composition of good diet and its importance ; preservation of food ; cooking of food ; drinks and condiments.

*Personal Hygiene.*—Cleanliness of body (hair, nails, teeth, etc.) ; clothing ; exercise ; importance of temperance ; the use of *pan*, opium and other drugs ; spitting.

*Precautions against diseases.*—Infectious diseases (small-pox, measles and diphtheria, etc.) ; colds and influenza ; tuberculosis ; enteric fever ; dysentery and diarrhoea ; cholera ; plague ; malaria ; itch ; leprosy ; ophthalmia (sore-eyes).

*II.—First Aid.*

Roller bandage, figure of eight as applied to knee, elbow, finger, ear ; bandage for eye, nose, chin. Bleeding of different kinds ; how to stop bleeding ; drowning ; burns ; scalds ; bruises ; sprains ; broken bones ; dislocation ; carrying injured people ; fainting ; sunstroke ; hysteria ; epilepsy ; suffocation ; foreign bodies in eye, ear, nose, and throat ; bites of mad dogs ; signs of madness in dogs ; snake-bite ; stings.

### III.—Home-nursing.

NOTE.—None of the work is to be purely theoretical. Practice must be given in every point which allows of practical work.

1. *Room*.—Bed ; bedding ; furniture ; light ; warmth ; ventilation.
2. *Nurse*.—Health ; dress ; qualifications of a nurse.
3. *Duties of Nurse*.—Administration of medicine ; pulse and temperature charts ; bathing ; changing of garments and bedding.
4. *External Remedies*.—Poultices ; plasters ; fomentations ; ice sponging ; baths ; temperature of baths.
5. *Food*.—Kind of food and preparation ; way of giving.
6. *Infectious Illness*.—Precautions during illness ; disinfection of room, clothing, and bedding after illness ; use of disinfectants.
7. *Convalescence*.—Occupations ; visitors ; rest, sleep and food.

### IV.—Care and training of children.

Food, sleep, exercise, play, clothing, cleanliness, surroundings.

### V.—Household Management.

A.—Choice of House. Furniture and Decoration. Distribution of rooms. Cleansing and care of house and furniture. Disposal of refuse and sewage. Precautions against flies and mosquitoes.

B.—Care of the kitchen.

Preparation of simple food.

Two of the following groups to be selected of which group (i) is compulsory :—

- (i) Preparation of *roti*, rice, *dal* and *tarkari*.
- (ii) Preparation and care of milk ; and making of sweets.
- (iii) Preparation and care of meat. (One dish only required.)
- (iv) Preparation of preserves (*murabba*) and pickles (*achars*).

C.—Duties of the mistress of household.

Proper distribution of daily activities. Accounts and budgeting of expenditure.

### VI.—Clothing.

- (i) Choice and care of clothing.
- (ii) Methods of washing and ironing cotton, woollen, and silk materials.

NOTE.—Practical work should be done.

- (iii) Sewing and cutting out.

A good standard of skill will be required in the various stitches that are necessary in making up garments and in mending worn articles of clothing.

Each candidate should select three of the following groups of which one must be (a), (b) or (c) :—

- (a) To draft, cut out to measurement and make up coat (*achkan*) or *pyjama* or shirt (*kurta*) or waistcoat for a man.
- (b) To draft, cut out to measurement and make up *kurti* or blouse or skirt or petticoat or *pyjama* for a woman.
- (c) To draft, cut out to measurement and make up frock or bonnet or *pyjama* or *bandi* for a child.
- (d) Drawn thread or crewel work or English embroidery or *chikan* work or *sulme sitare*,
- (e) Spinning.
- (f) Weaving.

Notes should be kept, if possible. Work in drafting what is done throughout the year should be sent to the examiner in sewing.

NOTE.—As an indication of the scope and standard of instruction in hygiene and home-nursing teachers are referred to sections II, III and IV of Personal and Domestic Hygiene for the School and Home, by Mrs. Harold Hendley (Rai Sahib M. Gulab Singh & Sons, Lahore), also to Indian Manual of First Aid and Indian Home-nursing published by the Indian Council of the St. John's Ambulance Association (Thacker, Spink & Co., Calcutta).

*Books for teachers' reference—*

- 1. Physiology, by T. Huxley.
- 2. Tropical Hygiene, Lukis and Blackham (Thacker, Spink & Co.).
- 3. Outline of Domestic Science (for Indian Readers), by Lilian Sawtell (Longmans, Green & Co.).
- 4. Training of Children under five years.
- 5. Child-welfare, by Dr. S. K. Mukerji (Indian Press, Allahabad).
- 6. Domestic Science for High Schools in India, by Needham (Oxford University Press).
- 7. Good House keeping (magazine).
- 8. Home Nursing (St. John Ambulance Association, New Delhi).

## IX.—METAL WORK.

The examination will consist of one paper of three hours in Drawing and Theory, and a practical test for four hours in Forging and Fitting Work.

## SYLLABUS.

(a) *Practical work*.—A series of models graded in respect of tool manipulation to be made in metal from Working Drawings or from Patterns, and involving the use of Forge, Anvil, Vice, Tongs, Top and Bottom Tools, Drills, Hammers, Files, Stocks and Dies, etc. Exercises should include Drawing Down, Upsetting, Welding, Annealing, Hardening and Tempering, Rivetting, etc., and such objects as Punches (nail and centre), Scribing Knife, Nuts and Bolts, Rings, Chain Links, Hasp and Staple, Keys (for shafting), Coat Hook, Wall Bracket, Letter Weight, Calipers, Wall-Holdfast, Cold Chisels, Drills, etc.

(b) *Theoretical work*.—Properties and uses of different metals, Iron (malleable and cast), Steel, Brass, etc. Sections and weights of above. Length calculations, Working heats, Care and maintenance of tools, forge, etc.

(c) *Drawing*.—In orthographic projection of all models made during the course.

*Books recommended.*—

1. Smithy and Forge, Crane, approximate price Rs. 2. (Publishers, Crosby Lockwood.)
2. Smith's Work, Hasluck, Rs. 2. (Cassels.)
3. Educational Handwork, Jenkins, Rs. 3 (University Tutorial Press).

General book-binding materials, threads, tapes, covers, edges, tops, backings in various materials, cloth, leather, vellum. Adhesives, manufacture and use. Forms of binding, cloth, paper, quarter and half leather.

Decorative materials, gold leaf, silver-leaf, inks, colours and varnishes.

*Tools and appliances (b) :—*Guillotine, Stitching Frame, Punching Frame, Backing Press, Standing Press, hand working tools, hammers, punches, scissors, needles, knives, embossing tools, etc.

*Practical (c) :—*Folding and cutting papers to various sizes. Sewing by various methods including section, and Tanni Silai. Rounding and backing, covers and corners in cloth, leather, etc. Simple decoration of book covers by tooling, embossing and colouring on various materials, lettering and gilding. The repair and re-backing of old books, care of books, preservation and repair.

Books suggested :—(a) for teachers—Book-binding and the Care of Books by John Hogg,

(b) for students—Book-binding, by Cassels.

## XII.—SPINNING AND WEAVING.

The examination will consist of one paper of three hours and a practical examination (including oral test) not exceeding four hours.

*Syllabus—*

*Spinning—(a) Theory.*

1. A brief survey of the principles of seed selection, land preparation, cultivation, growth, distribution, ginning and marketing of cotton.
2. Types and classes of the different cottons grown in the various parts of the world with particular reference to Indian-grown cottons. The utilisation of all classes of cotton for the various kinds of cloth.
3. The physical properties of cotton, structure, length, diameter and colour of the different varieties.
4. The preparation of the cotton fibre for hand spinning, hand ginning and cleaning.

5. Spinning by the spinning wheel. The principles of hand drawing, twisting and winding in comparison with various types of spinning wheel.

6. The qualities and usefulness of well-spun yarn. The effect of spinning on the preparatory and weaving processes.

7. Methods of disposal of yarn.

8. A brief survey of other raw materials used in spinning such as wool, silk, waste silk.

*Spinning—(b) Practical.*

The spinning wheel and its manipulation, three principles in operation, viz., drawing, twisting and winding.

*Weaving—(a) Theory.*

1. Its numeration and explanation of the different forms in which yarn is supplied to the weaving section for making into cloth, e.g., cops, hanks, cones, cheeses, etc.

2. Winding on the "Charkha" and methods adopted when winding from the forms mentioned above. The necessity of good winding and also of the traverse showing how badly-made bobbins affect the subsequent processes.

3. Warping and its object. The methods used, such as single-end multiple and Ball-warping machine in the making of warps for the loom.

4. Sizing and its necessity. The common ingredients used and the methods of application to the yarn. The effect of faulty sizing and application in the after processes.

5. Methods used in the running-off of warps on the weaver's beam.

6. Drawing in, its necessity, object and manipulation, Healds and Reeds, Drawing-in-implements.

*Weaving :—*"Gaiting" the warp in the loom. Explanation of the three main motions, viz., shedding, picking, beating-up. Shedding as done by pedals and applied to the various types of cloth. The manipulation of the pedals, picking and how it is done. Beating-up to produce different thickness or fineness of cloth. Description of the parts in a sley; shuttle, pickers, shuttle boxes and all sundry parts.

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*Calculations* :—The system of counting yarns—cotton, wool, silk, etc.

The testing of counts, folding of yarns, quantity of warp and weft in a piece of cloth. Head knitting, reeds and warping.

*Designing* :—The standard weaves such as plain, twill, satins, combination and re-arrangement of these weaves, stripes, mock lenos and similar cloths. Analysis of these cloths with drafting and lifting plans.

The make up and marketing of the above.

Finishing of cloths.

*Weaving*—(b) *Practical* :—

The making of warps by the "single," "multiple" and "Ball warp" methods—Winding on to warp bobbins and also weft-pirns. Sizing of yarn by hank and in ball warp. "Running-off" of warps on to plains, drills, twills and simple tie-up designs.

Books suggested for teachers' use and students' reference :—

1. Cotton Spinning, Vol. I, by W. S. Taggart (Macmillan).
2. Cotton Weaving and Designing, by J. T. Tayler (Longmans).
3. Hand-loom Weaving, by L. Hooker (Pitman).

### **XIII.—GENERAL SCIENCE (PHYSICS, CHEMISTRY AND BIOLOGY).**

There will be two papers of three hours each as follows :—

1st Paper—Physics and Chemistry.

2nd Paper—Biology and Chemistry.

(NOTE.—Each paper will consist of eight questions three of which will be in Chemistry.)

*Syllabus*—

(It is assumed that candidates taking General Science have completed the Science course laid down for the Upper Middle section as questions may be asked from this course also in the High School Examination.)

#### *I.—Physics.*

Pressure at different depths in liquids. Density. Specific Gravity. Archimedes' Principle and its applications. Flotation (Ships.

Airships, Balloons, Icebergs). Air-pressure. Effects of air pressure. Syringe. Simple water pump. How the pressure of the air is measured. Barometer movements and weather. Action of the football and bicycle pumps. Bicycle valve. Kites, aeroplanes. Steam pressure. Force on piston of steam engine. Simple manometer.

Rectilinear propagation of light. Candle-power. Plane mirrors. Laws of reflection. Images in spherical mirrors (no formulae). Refraction. Magnifying glass. Simple ideas about the principles and use of Camera. Dispersion and colour.

Electrification. Electroscope. Conductors and insulators. Magnets. Polarity. Earth's Magnetism. Compass needle. Cells and batteries. Electro-Magnet. Simple explanation of the telegraph and the electric bell. Simple galvanoscope. Heating and chemical effects of a current.

Sources of heat. Expansion of solids, liquids and gases. Effects of expansion ; platinum and glass. Thermometers. Air and clinical thermometers. Freezing mixtures. Transference of heat. Davy's safety lamp. Winds. Cold nights with cloudless sky. Thermos-flask. Units of heat. Specific heat. Latent heat (no calculation). Cold on evaporation. Heat on compression. Humidity. Change of volume on melting. Boiling of liquids ; vapour pressure ; steam engine.

## II.—Chemistry.

Solutions in water and other liquids. Crystallization. Slow and rapid evaporation. Saturated solutions. Elements, compounds and mixtures. Study of atmosphere. Oxygen and Nitrogen. Combustion ; slow and rapid. Flame. Water. Properties of Hydrogen. Ammonia. Limestone. Sodium carbonate and caustic soda. Hard and soft waters. Acids. Bases. Salts. Chemical symbols. Conservation of mass. Carbon : properties and varieties. Carbon dioxide. How plants use air. Respiration. Coal gas. Sulphur : properties and varieties. Sulphur dioxide. Chlorine. Hydrochloric acid. Phosphorus. Matches. Common salt. Properties of metals, non-metals. Alloys. Simple ideas of the properties of iron and steel. Petroleum : sources and use. Soap. Glass.

### III.—Biology.

*Life of Animals, based on the frog.*—External parts and their work. Internal parts and their work : Digestive system : food and digestion. Circulatory system and blood : work of blood and need for circulation. Lungs and breathing. Kidneys and excretion. Nervous system : sensation and special senses. Muscles and movement. Bones and support. Reproductive system and reproduction. Habits and life history of the frog.

*Elementary physiology of the human body.*

*General survey of the animal kingdom.*—Illustrated mainly by local animals.

*Life of plants based mainly on mustard (or bean plant).*—Various forms of plants : trees, herbs, climbing plants, parasites, non-green plants. Parts of the plant and their work. Leaves : manufacture of food ; loss of water to air. Stem : carrying water and food ; support of leaves. Root : collecting water and salts from the soil ; holding the plant in position. Storage of food. Flower : pollination, fertilization, fruits, and the scattering of seeds. The new plant in the seed ; germination. Production of new plants from stems and roots.

*General survey of the plant kingdom.*—Illustrated mainly by local plants.

*The value of plants and animals to man.*—Food, fuel, clothes, power, building materials, medicines, pleasure, scavenging of waste materials (dogs, jackals, cows, bacteria, fungi).

*Animals and plant that are harmful to man.*

(1) That feed on man and animals : ticks, lice, fleas, bedbugs, mosquitoes, intestinal worms.

(2) That feed on plants : destruction of plants by insects.

(3) That cause disease in man and animals : animals parasites (malaria parasite, kala azar, hookworm) and bacteria (cholera, plague, small-pox, tuberculosis, rabies, etc.).

(4) That cause diseases in plants : parasitic fungi (mildews, smuts, rusts, etc.).

(5) That carry disease, insects (flies, fleas, sandflies, mosquitoes), rats.

(6) That destroy property : rats ; white-ants ; beetles, bacteria and molds in food ; wood-rotting fungi, etc.

(7) Control of parasites, disease-producing organisms and other pests ; by nature (birds and insect-eating insects) and by man.

#### *IV.—Practical work.*

The following list of experiments indicates the minimum amount of practical work required to be done by each student. Other experiments of equal educational value may be substituted. It should be possible for most teachers to get their students to perform additional experiments. The experiments should be performed individually as far as can be arranged. The teaching of theory should be fully illustrated by experiments and demonstrations which are to be considered an essential part of the teacher's work. The course in Biology will not require extensive expenditure on equipment and materials. Practically all materials can be collected from the local fauna and flora. No microscopic work is expected to be done individually by the pupils ; only that may be done by demonstration on the part of the teacher, when he believes it will add to the effectiveness of the work.

NOTE.—A chart giving a list of the experiments to be performed and the date on which each student completes each experiment should be maintained and hung in the laboratory at each school recognised in General Science.

#### *Physics.*

To show that the weight of a floating body is equal to the weight of the liquid displaced (using a loaded test tube in a graduated jar with different liquids).

Determination of the radius of a wire by Archimedes' Principle.

Determination of the relative density of (a) bodies which sink in water, (b) liquids.

To measure (a) the pressure of the lungs, (b) gas supply (if any).

Reflection at a plane mirror.

Focal length of (a) concave mirror, (b) convex lens by parallel rays method.

Relation between image and object produced by (a) concave mirror, (b) convex lens (no calculations).

Refractive index of glass and liquids.

Refraction through a prism.

Cooling curve of water and wax.

Determination of the apparent expansion of water (by heating water in a flask and noting rise in level of surface.)

To compare heat required to melt ice and to boil water.

To show that the loss of heat of one body is equal to the gain of heat in another.

To map lines of force by a small magnet charging an electroscope.

Magnetic effect of a current.

*Chemistry.*

To observe the action of water on sodium, sodium chloride, potassium nitrate, sodium carbonate, copper sulphate.

Crystallization of a salt.

To observe the action of heat on potassium nitrate, calcium carbonate, copper sulphate, iron, zinc, tin, lead, mercury, sulphur, phosphorus.

To determine the change in weight due to oxidation when a substance is sufficiently heated in air.

To find the proportion of oxygen and nitrogen in air.

To prepare oxygen from potassium chlorate and study its properties.

To prepare hydrogen from zinc and sulphuric acid and study its properties.

To prepare chlorine from manganese dioxide and hydrochloric acid.

To prepare hydrochloric acid from sodium chloride and sulphuric acid.

To prepare ammonia gas from ammonium chloride and quicklime and study its properties.

To prepare carbon dioxide from limestone and hydrochloric acid and study its properties.

To find the volume of oxygen given off by heating 15 grams of potassium chlorate.

*Biology.*

Observation of living frogs ; habits and mode of life.

Demonstration of more important features of the internal parts.

Students should sketch easier parts.

Observation of life history in the field and in the laboratory.

Demonstration of common representatives of the animal kingdom.

Students should be encouraged to collect materials ; should be developed as a museum activity.

Collection and sketching of common plant forms.

Study and sketch of parts of plants.

Simple experiments, mainly demonstrations, to show accumulation of food (starch) in leaves exposed to light. That water is lost through the leaves. That plants require a continuous supply of water. That water rises through the stem. That  $\text{CO}_2$  is given off during respiration. That plants grown in darkness are not green, but become green upon exposure to light. Process of germination ; study and sketch (bean, chana and castor bean).

Demonstration of common representatives of the plant kingdom.

The project to be developed as for animals.

Observation and collection of insects that feed on cultivated plants.

Collection of fungus diseases of plants, especially of crop plants ; a study of the damage they cause.

Animals that carry disease ; their habits and life histories.

Observation and study of plants and animals that destroy property.

Control of bacteria, by heat, drying, chemicals.

Examination of the breeding places of mosquitoes, flies, rats.

Experiments to show means of destruction.

*Books suggested—*

- (1) Gregory and Hodges—Experimental Science for Indian Schools (Macmillan).
- (2) Parsons—Everyday Science.
- (3) Marie Stopes—Human Body (Gill, London). 5s.
- (4) Green and Potter—Biology by discovery (J. M. Dent & Sons, Ltd., London). 5s.
- (5) Whitehouse—Assignments.

## APPENDIX.

*A note on the General Science Course for the guidance of teachers.*

The course in General Science consists of Physics, Chemistry and Biology and is intended to awaken the interest of young students in and give them an intelligent appreciation of things and life around them. With this general purpose in view, the syllabus is mainly descriptive and all quantitative relations are omitted. The teacher should keep this main purpose of the syllabus in mind in presenting the different sections of the subject and emphasize the part these sciences play in modern life. In Biology the teacher should emphasize the life-functions of frog and man rather than details of structure ; in plants, it is not the shapes and kinds of structures that should be emphasized, but the fact that the plant is a living organism. How animals and plants obtain their food, breathe, re-act to their surroundings and reproduce their life rather than elaborate details of structure is the important thing.

Practically every item of the syllabus can be illustrated by a simple experiment and students should be encouraged to learn the subject more from direct experience and demonstration rather than by reading books alone. The teacher is recommended carefully to prepare his material and experiments before their demonstration in the class and induce students to write out notes of what they have seen. These notes supplemented by reading of suitable books must form the basis of his knowledge of the subject.

The syllabus lays down a list of experiments in each section which the student is expected to carry out himself. This does not, however, limit the teacher's freedom of suggesting additional experiments in any section. The student in the practical room should, in fact, have free access to material or apparatus and might be allowed, wherever possible, to repeat for himself the experiments which were shown in the class room.

**DIPLOMA EXAMINATION IN INDIAN MUSIC.**

There will be one paper of two hours' duration and a practical examination.

Marks are allotted as follows :—

	Marks.
Theory paper.. .. .	30
Practical examination .. .. .	70

Pass marks in the total of Theory and Practical shall be 33 per cent.

*Courses of study.*—

**Theory.**

Definitions and explanations of the following technical terms :—

Sangeeta, Swara, Sudha Swara, Vikrit-swara, Saptaka, Aroha and Avaroha, Alankara, Raga, Thata, Sampoorana Raga, Shadava Raga, Oudava Raga, Vadi, Samvadi, Anuvadi, Vivadi, Poorva Raga, Uttara-  
raga, Matra, Laya, Tala, Alapa, Tan, Pakarh, Dhrupad, Khyal, Tappa and Thumri.

**Practical.**

(a) Swaragyan.

(b) One Sargam, One Lakshan geeta and one classical song in each of the following Ragas :—

Bilaval, Khamaj, Yaman, Kaphi, Asavari, Bhairavi, Bihag, Desh, Bhimpalasi, Piloo, Bhupali, Brindabani Sarang, Bhairav and Bageshwari.

(c) Tritala, Dadra, Jhaptala, Ektala, Chautala, Teevra, Kaharva, Deepchandi, and their Doons (double measure).

The following text-books are recommended :—

For Theory—The Shastra Pravesha, 2nd, 3rd and 4th parts, published by the Marris College of Hindustani Music.

For Practical Music—Selections of relevant Ragas and Songs from Sangit Balbodh by Pandit Vishnudigambar Paluskar or from the Kramika Series, Parts, I, II and III by Pandit V. N. Bhatkhande.

**INTERMEDIATE EXAMINATION.**

(N.B.—Alternative questions will be set in all question papers for the Intermediate Examination.)

The following grouping of subjects is approved for the guidance of students and teachers. The subjects have been so grouped that, while providing a sound general education, suitable as an introduction to University studies, they should also fit the students to enter upon higher specialized courses in technical and professional institutions :—

*General Arts.*—Mathematics, Economics, \*Civics, Geography, Drawing, a Modern Indian or European Language, Logic, a Classical Language, History and Allied Geography, Histories of Greece and Rome and Allied Geography. (*Any three should be taken.*)

*General Science.*—Mathematics, Drawing, Chemistry, Physics, Biology, Geography, Economics. (*Any three should be taken.*)

*For Medicine.*—Chemistry, Physics and Biology.

*For Engineering.*—Mathematics, Physics and Chemistry.

*For Teaching.*—(1) History, Civics and Geography.

(2) History, Geography and Mathematics.

(3) History, Geography and (Physiology, Hygiene and Child-Study) (*women students*).

(4) Geography, Mathematics and (Physiology, Hygiene and Child-Study) (*women students*).

(5) Geography (or Mathematics), Biology and (Physiology, Hygiene and Child-Study) (*women students*).

(6) History, Geography and Economics.

(7) Mathematics, Geography and Economics (or Drawing).

(8) Mathematics, Physics and Chemistry.

(9) Mathematics, Physics and Biology.

(10) Chemistry, Physics and Biology.

(11) Biology, Physics (or Chemistry) and Drawing.

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\* Students taking Civics are advised also to take History.

(12) (Physiology, Hygiene and Child-Study), a Classical Language and History or Geography or Mathematics (*women students*).

(13) (Physiology, Hygiene and Child-Study), Drawing and Biology or Geography or a Classical Language (*women students*).

### ENGLISH.

There will be *one* paper of three hours on the prescribed Prose course and a *second* paper of three hours on the prescribed Poetry course ; and in each paper there will be one question on "Unseen" passages. The prose paper will contain one or more prose unseens and the poetry paper will contain one or more poetical unseens.

A *third* paper of three hours will include (a) translation from a Modern Indian Language into English, and (b) an essay on easy subjects of general interest. The latter will include among the alternatives descriptive or narrative subjects. In the case of candidates who offer English as their mother-tongue, the third paper will consist of an Essay, together with questions on English Composition and on the History of English Literature from 1500, as in Hudson's Outline of English Literature (Bell & Co.).

NOTES.—(1) In the case of books prescribed for detailed study candidates will be expected to show a close familiarity with the text, including meaning of words, construction of sentences, historical and other allusions, as well as knowledge and understanding of the subject-matter. They should be able to indicate contexts and to paraphrase and explain any difficult passages in simple and correct English.

(2) In the case of books prescribed for general study detailed knowledge of the text will not be required, but candidates will be expected to show that they have read the course with intelligence and with some appreciation.

#### *Books prescribed—*

##### *Prose—(a) For detailed study—*

1. Pleasures of English Prose, by Gokal Chand (Indian Press, Ltd., Allahabad), (omitting Defoe ; Fielding ; De Quincey ; Cunningham-Graham ; and Robert Lynd). Rs. 2.

2. Goldsmith's Vicar of Wakefield (abridged edition, the Indian Press, Ltd., Allahabad).

##### *(b) For general study—*

1. George Eliot's Silas Marner (Indian Press, Ltd., Allahabad).

2. Short Stories, by Buchan (Nelson).

*Poetry—(a) For detailed study—*

1. Tennyson—Enoch Arden.
2. The following poems from the 1928 edition of Palgrave's Golden Treasury, with additional poems (Oxford University Press, Indian edition) are prescribed :—

Shakespeare—"When to the sessions of sweet silent thought."

"Since brass, nor stone, nor earth, nor  
boundless sea."

Keats—"La Belle Dame Sans Merci."

Milton—"On his blindness."

"Captain, or Colonel, or Knight in Arms."

Tennyson—"Ring out, wild bells."

"Tears, idle tears."

"The splendour falls on castle walls."

Wordsworth—"The world is too much with us."

"Upon Westminster Bridge."

Browning—"Prospice."

W. E. Henley—"Out of the night."

Robert Bridges—"Nightingale."

Christina Rossetti—"Up-Hill."

Rupert Brooke—"If I should die."

Masefield—"Sea-Fever."

Kingsley—"Young and Old."

Whitman—"O Captain, my Captain."

Flecker—"The Golden Journey to Samarkand."

Thomson—"As we rush."

*(b) For general study—*

Shakespeare—"The Merchant of Venice."

*Recommended for use by students :—*

The Pocket Oxford Dictionary.

NOTES.—(a) Half the total of marks will be allotted to the portions for detailed study, 30 per cent. to the portions for general study, and 20 per cent. to Unseen Passages and Grammar.

(b) Grammatical questions will be asked, including Parsing, Analysis, the Sequence of Tenses and conversion of the Direct and Indirect forms of speech.

(c) The attention of candidates is drawn to the fact that examiners have been instructed to deduct marks for inaccuracy in English.

## MATHEMATICS.

There will be three papers of three hours each ; one paper in Algebra and Trigonometry, a second in Mensuration and Analytical Geometry, and a third on Elementary Dynamics and Statics.

(1) (a) *Algebra*.—Quadratic equations involving two or more unknown quantities ; the theory of quadratic equations and of expressions of the second degree ; surds and imaginary expressions ; arithmetical, geometrical and harmonical progressions ; permutations and combinations ; theory of indices and logarithms ; proof of binomial theorem for a positive integral index and the use of binomial and exponential theorems for any index.

(b) *Trigonometry*.—Including solution of triangles and simple problems on inscribed, circumscribed, and escribed circles.

(2) (a) *Analytical Geometry*.—Straight line, pair of straight lines, circle (including radical axis and pole and polar) ; equation to parabola in form  $y^2=4ax$  and simple properties deduced therefrom ; simple properties of tangents and normals to the ellipse deduced from the equation  $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$ . (Oblique, cartesian and polar co-ordinates will not be required.)

(b) *Mensuration of Solids*.—Surfaces and volumes of parallelopipeds and right prisms, pyramids, circular cylinders and cones, spheres and spherical segments ; frusta of pyramids, cones and spheres.

The use of Trigonometry and Logarithms will be permitted in solving numerical examples.

(3) *Dynamics and Statics*.—Velocity, composition of velocities ; relative velocity ; acceleration, rectilinear motion under uniform acceleration, composition of accelerations ; Newton's Laws of motion ; rectilinear motion under gravity in a vertical and down an inclined plane ; motion of two masses connected by a string passing over a pulley ; projectiles ; direct impact of smooth bodies ; definition and calculation of kinetic energy ; co-planar forces, parallel and non-parallel, and their composition ; equilibrium of a body under three forces ; moments ; conditions of equilibrium of a body under a system of co-planar force and simple examples ; centre of gravity ; friction ; work and power ; simple machines (lever, balance, system of pulleys, wheel and axle).

NOTE.—The use of stencils and slide rule in answering questions in Mathematics is not allowed.

The following books are suggested (*not prescribed*) in addition to more elementary text-books :—

1. School Algebra, H. S. Hall, Parts I—III.
  2. School Algebra, Part II, by Paterson (Clarendon Press).
  3. Elementary Algebra, Part II, by P. Ross (Longmans).
  4. Higher Algebra, Chapters I—XVII, by Hall and Knight (Macmillan).
  5. Hall and Steven's School Geometry, Part VI.
  6. Elements of Analytical Geometry, Part I, by Wanchoc (Indian Press, Ltd., Allahabad).
  7. Co-ordinate Geometry, by Smith or Loney (Macmillan).
  8. Elements of Statics and Dynamics, by Loney (Cambridge University Press).
  9. Intermediate Trigonometry, by C. C. Ghosh (Macmillan).
  10. Plane Trigonometry, Part I, by S. L. Loney (Macmillan).
  11. Tutorial Algebra, by Briggs  
and Brian .. .. .
  12. Tutorial Statics, by Briggs  
and Brian .. .. .
  13. Tutorial Dynamics, by Briggs  
and Brian .. .. .
- } (University Press). Tutorial
14. Algebra for Intermediate Colleges, by M. A. Butt (Indian Press, Ltd., Allahabad).

### CHEMISTRY.

(N.B.—Candidates will be required to pass in the theoretical as well as practical part of each Science subject. The use of stencils and slide rule in answering papers in Chemistry is not allowed.)

There will be two papers of three hours each and a practical examination. The first paper will include metals and non-metals and the second paper general Chemistry and organic Chemistry.

The following syllabus is prescribed :—

The course for the High School Examination of 1934 with the following additions :—

Elementary and compound substances, mixtures, solution, chemical action, the laws of definite and multiple proportions, simple methods of the determination of equivalent weights, atoms, molecules, atomic and molecular weights, vapour density, the atomic theory and Avogadro's hypothesis, combination of gases by volume.

Valency, relation between equivalent and atomic weights, simple methods of determination of atomic weights, Dulong and Petit's law, Boyle's law, Charles' law, vapour pressure, diffusion.

Chemical symbols, formulae and equations, calculations of an easy nature.

Oxidation and reduction.

Elementary ideas as to the nature of dissociation in gases and electrolytic dissociation theory.

The outlines of the Periodic law studied from elements prescribed in the course.

Preparation and important properties of the following elements and compounds and proofs of the composition of the compounds marked\* :—

Hydrogen, oxygen, water\*, ozone, hydrogen dioxide, nitrogen, the atmosphere\*, the effects of animal and vegetable life upon its composition, ammonia\*, nitric acid and nitrates, nitrous acid and nitrites, nitrous\* and nitric\* oxides, nitrogen peroxide, carbon, carbon\* dioxide, carbon\* monoxide, elementary ideas about combustion and structure of flame, coal gas, chlorine, hydrochloric\* acid, chlorides, chlorine peroxide, chloric acid and chlorates, bromine, iodine, their hydracids and salts.

Sulphur, \*hydrogen sulphide, \*sulphur dioxide and trioxide, sulphuric acid and the sulphates, sulphurous acid and sulphites.

Phosphorus, hydrogen phosphide, chlorides of phosphorus, phosphorus trioxide and pentaoxide, orthophosphoric acid.

Silica, silicates of Na, K & Ca, glass.

Sodium, potassium, their hydroxides, chlorides, nitrates, carbonates, sulphates.

Calcium, strontium, barium, and their oxides, carbonates, sulphates, chlorides, nitrates.

Magnesium, its oxide, chloride, sulphate, carbonate and nitrate.

Lead, its chloride, sulphate, nitrate and acetate.

Copper, the outlines of its metallurgy, its oxides, chlorides, sulphate, nitrate and sulphides.

Iron, the outlines of its metallurgy, its oxides ( $\text{FeO}$ ,  $\text{Fe}_2\text{O}_3$ ,  $\text{Fe}_3\text{O}_4$ ), chlorides, sulphates and sulphides.

Zinc, its oxide, chloride, carbonate and sulphate.

Mercury, oxides, chlorides, nitrates, sulphide.

Aluminium, oxide, chloride, sulphate.

Arsenic, hydride, oxides, sulphides.

Antimony, hydride, oxides, chlorides, sulphides.

Tin, oxides, chlorides, sulphides.

Silver, oxide, hydroxide, chloride, bromide, iodide, nitrate and sulphate.

Organic :—

A.—The preparation, typical properties and structural relationship of the following compounds :—

Methane, ethane, ethylene, acetylene, chloroform, iodoform.

Methyl alcohol, ethyl alcohol, and ether.

Formaldehyde, acetaldehyde, and acetone.

Formic acid and acetic acid.

Ethyl acetate and methyl acetate.

Acetamide, acetyl chloride, acetic anhydride.

Methylamine.

B.—The simpler properties of the following :—

Glycerol, oxalic acid, tartaric acid, fats, soaps (and saponification), starch, cane sugar, grape sugar (and fermentation), urea, benzene, nitrobenzene, phenol, aniline, benzoic acid, proteins.

### Practical Work.

*Students will be examined in Practical Chemistry.*

Students are expected to perform the following experiments in the laboratory. An account of each experiment must be written by the student in a special note-book, which will be liable to examination by the examiners. This note-book should be kept in the charge of the laboratory instructor and each account of an experiment should be signed by him. The Principal of a College will be responsible for the production of this note-book when demanded by the proper authorities.

The *practical* course is as follows :—

1. Such practical work as is required for the High School Examination of 1934.

2. Analysis of simple salts soluble in water or hydrochloric acid composed of acids and bases mentioned in the following list :—

Ag, Pb, Hg, Cu, Cd, Bi, As, Sb, Sn, Fe, Al, Cr, Ni, Co, Zn, Mn, Mg, Ca, Sr, Ba, Na, K,  $\text{NH}_4$ , Cl, Br, I,  $\text{ClO}_3$ ,  $\text{SO}_4$ ,  $\text{SO}_3$ ,  $\text{NO}_3$ ,  $\text{NO}_2$ ,  $\text{PO}_4$ , S,  $\text{CO}_3$ ,  $\text{C}_2\text{O}_4$ , acetate (*dry and wet methods*).

3. Preparation and purification of simple salts involving no special difficulty.

4. (a) Simple gravimetric experiments, such as change in mass on oxidation of magnesium and on heating barium chloride, sodium bicarbonate, or ferrous ammonium sulphate.

(b) Simple volumetric exercises such as preparation of standard solutions by weighing ( $\text{Na}_2\text{CO}_3$ , Oxalic acid, etc.) and estimation of alkali and acids by titration.

5. Determination of melting and boiling points.

6. Qualitative detection of nitrogen, sulphur, and one of the halogens, alone or together, in an organic compound.

*Books suggested—*

1. SHENSTONE : Inorganic Chemistry. (Arnold).
2. J. W. MELLOR : Introduction to Inorganic Chemistry (Longmans).
3. ROSCOE AND HARDEN : Inorganic Chemistry for advanced students.
4. A Class-book of Organic Chemistry, by J. B. Cohen.
5. Organic Chemistry, Part I, by Perkin and Kipping. (W. and R. Chambers).
6. DONINGTON'S Class-book of Chemistry, Parts 1—4.
7. HOLMYARD'S Inorganic Chemistry. (Arnold). 6s. 6d.
8. HOLMYARD : Practical Chemistry. (Bell & Sons, Ltd.). 4s.
9. OSCROFT : Inorganic Chemistry for Upper Forms. (Bell & Sons, Ltd.). 6s. 6d.
10. MALVEA : Practical Chemistry for Intermediate Colleges. (Indian Press, Allahabad.) Rs. 2.
11. NEWTH : Chemical Lecture Experiments for teachers' use (latest edition). (Messrs. Longmans, Green & Co.). 8s. 6d.
12. HOLMYARD : Introduction to Organic Chemistry. (Arnold.)
13. BRUCE AND HARPER : Practical Chemistry, 1925 edition (Macmillan.)
14. RANE AND KULKARNI : Practical Chemistry for Intermediate students (Nand Kishore and Brothers, Benares).

## PHYSICS.

(N.B.—Candidates will be required to pass in the theoretical as well as practical part of each Science subject.)

There will be two papers of three hours each as follows :—

1st Paper—Properties of Matter, Heat and Light.

2nd Paper—Sound, Electricity and Magnetism.

The following syllabus is recommended :—

*General properties of matter.*—Fundamental units and their measurement, Principle of Balance, Verniers, Calipers, Screw-gauge, Spherometer, Volume, Density, Specific gravity, Fluid pressure, Principle of Archimedes, Nicholson's hydrometer, Barometer, Boyle's law, Pumps, Siphon, Elementary notions of volume, elasticity, and Young's modulus in the case of solids. Isothermal and adiabatic elasticities of gases. Gravitation, simple harmonic motion. Pendulum. Value of " $g$ ". Laws of simple machines, such as levers and pulleys. Laws of motion.

*Heat.*—Temperature. Thermometers. Calorimetry. Specific heat. Latent heat. Expansion of solids, liquids and gases. Vapour pressure. Hygrometry. Change of state. Laws of unsaturated and saturated vapours. Conduction. Convection. Radiation. Reflection and absorption of heat. Isothermal and adiabatic changes. Specific heat at constant volume and constant pressure. Relation of heat to work. Determination of  $J$ . Steam Engine and simple ideas on the Otto engine.

*Light.*—Laws of propagation. Reflection and refraction from plane and spherical surfaces. Dispersion. Spectra. Fraunhofer's lines. Telescope. Microscope. Spectrometer. Photometry. Phosphorescence. Fluorescence. Velocity of light. Elementary ideas of polarisation of light.

*Sound.*—Transverse and longitudinal waves. Nature of sound waves. Intensity. Pitch. Quality. Mode of propagation. Reflection. Refraction. Stationary waves. Beats. Resonance. Vibrations of strings and air columns. Monochord and organ pipes. Determination of velocity in solids, liquids and gases. Musical scale. The gramophone.

*Magnetism and Electricity.*—Magnetisation. Permanent magnets. Magnetic induction. Unit of magnetism. Magnetic field. Lines of

force and lines of induction. Tangent A and B positions of Gauss. Deflection and vibration magnetometers. Magnetic moments. Earth as a Magnet. Magnetic elements. H. Declination and Dip and their determinations. Electrostatic unit of quantity. Coulomb's law of force. Electric field. Gold leaf electroscope. Surface density. Potential. Capacity. Leyden jar. Capacity of a parallel plate condenser. Electrophorus. Wimshurst's machine.

Voltaic cells. Electric current and its magnetic effects. E. M. unit of current. Galvanometers. Ammeters. Voltmeters. Ohm's law and its verification. Unit of resistance and Potential difference. Specific resistance. Practical and absolute units. Determination of resistance. Wheatstone's bridge. P. O. Box. Heating effect of current. Joule's law. Determination of J. Electric glow lamp. Electric arcs. Chemical effects of current. Faraday's laws of Electrolysis. Electro-chemical equivalent. Voltmeters. Storage Cells. Electro-magnetic relations. Electro-magnetic induction. Induction coil. Simple dynamo. Motor. Electric Telegraph. Telephone. Microphone. Thermopile. X-ray.

*Books suggested—*

1. A Text-book of Physics, by R. S. Willows. (Messrs. Arnold & Co.)
2. Everyday Physics, by H. E. Hadley. (Macmillan & Co.). Rs. 4.
3. A Text-book of Practical physics for Intermediate classes, by S. R. Suri (Uttar Chand Kapur & Sons, Lahore).

*There will be also an examination in practical work.*

The laboratory course is indicated by the subjoined list of experiments. An account of each experiment must be written by the student in a special note-book which will be examined. The account of each experiment should be signed by the Demonstrator, and the books should be kept in his charge.

LIST OF EXPERIMENTS.

*Mechanics—*

Applications of the Triangle of Forces.  
Determination of " $g$ " by the pendulum.  
Nicholson's hydrometer.

*General properties of Matter—*

Measurements of mass by the balance.

Use of the Spherometer.

„ Screw Gauge.

„ Calipers.

Reading the Barometer.

*Heat—*

Testing fixed points of Thermometers.

Determination of Specific Heats.

„ Latent Heats.

Construction of a graph illustrating the rate of cooling of a liquid.

Verification of Boyle's law.

Determination of the co-efficient of linear expansion.

Determination of the relation between the pressure and temperature of a gas when its volume is kept constant.

*Light—*

Reflection and refraction of light at plane and spherical surfaces.

Determination of refractive indices.

Focal lengths of mirrors and lenses.

*Sound—*

Determination of the velocity of sound by resonance.

„ „ frequency of a fork by sonometer.

*Magnetism—*

Mapping out lines of force by a small magnet.

Determination of neutral points in a magnetic field.

Comparison of magnetic moments by the magnetometer.

Comparison of magnetic fields by a vibrating magnet.

*Electricity—*

Variation of magnetic force at centre of a coil with radius, number of turns and strength of current.

Determination of resistance by the use of Wheatstone's wire bridge.

„ „ „ Ammeter and Voltmeter.

Combination of cells in series and parallel.

Comparison of electromotive forces by the potentiometer.

NOTE.—The use of stencils in answering questions in Physics is not allowed, but the slide rule may be permitted in the practical examination in Intermediate Physics.

Recommended for teachers' reference library :—

(1) Text-book of Heat, by Stewart and Satterly (University Tutorial Press).

(2) Text-book of Light, by Stewart and Satterly (University Tutorial Press).

(3) Text-book of Sound, by Catchpool (University Tutorial Press).

## BIOLOGY.

There will be two papers of three hours each and a practical examination : the first paper on Zoology and the second paper on Botany.

The following syllabus is prescribed. Instructions for the teaching of Biology are appended :—

### I.—Zoology.

(*N.B.*—Candidates will be required to pass in the theoretical as well as practical part of each Science subject.)

A.—Living and non-living matter. The distinctive properties of living matter (protoplasm) and its chemical composition. The structure and life-history of Amoeba and malaria-parasite as examples of the Protozoa. A general conception of the structure and phenomena of the animal cell ; direct and indirect cell division. The union of cells to form tissues and the combination of tissues to form organs.

B.—The structure of Hydra as an example of the Metazoa. The principle of the physiological division of labour and the correlated differentiation of structure.

C.—The structure and bionomics of an Indian earthworm as an example of a segmented animal.

D.—The structure of the cockroach as a type of Arthropoda. A general survey of the life-history of the mosquito and house-fly, and their economic importance.

E.—The general characters of the Chordata.

F.—The general anatomy, histology and physiology of the various systems or organs in the frog.

G.—An elementary knowledge of the anatomy and osteology of the rabbit or other common mammal. The brain and eye of the sheep and the skull of the dog may be substituted for those of the rabbit.

H.—A general classification of the animal kingdom with the characteristics of the principal phyla.

I.—Reproduction, sexual and asexual ; ova and spermatozoa ; oogenesis and spermatogenesis. The elementary facts of the fertilisation and segmentation of the ovum, the outlines of the development and larval history of the frog, the three primary germ-layers and the organs derived from them.

## II.—Botany.

(*N.B.*—Candidates will be required to pass in the theoretical as well as practical part of each Science subject.)

A.—The structure and germination of seeds, the morphology of the root, stem, and leaf. The chief types of floral structures. The chief types of inflorescence and the common types of fruits.

B.—The parts of a typical vegetable cell ; the cell contents and their microchemical reactions ; the division of a cell ; the chief types of plant tissues. A comparative study of the internal structure of the root, stem, and leaf of the Angiosperms. The structure of the reproductive organs of the Angiosperms.

C.—The structure of *Bacillus subtilis* and the modes of nutrition among the Bacteria.

D.—The structure, physiology and life-histories of *Ulothrix*, *Spizogya*, *Mucor* and yeast.

E.—The structure and life-histories of a moss and a fern, and the phenomenon of alteration of generations.

F.—The life-history of Angiosperms. General structure of flowers and fruits. Recognition and economic importance of the following families :—

Cruciferae, Malvaceae, Leguminosae, Compositae and Liliaceae.

G.—An outline of the classification of the vegetable kingdom to illustrate grades of structure and methods of reproduction.

H.—Elementary plant physiology ; stability of the plant body ; the usual constituents of plant food ; assimilation ; transpiration ; respiration ; the main facts about growth ; the chief types of movements.

### Practical work.

Students are expected to keep a record of all practical work in a special laboratory sketch-book, which will be liable to examination by the examiners. The laboratory instructors should sign the result of each day's practical work.

A.—The microscopical study of *Amoeba* and *Hydra* ; the study of *Hydra* by means of transverse and longitudinal sections.

The general dissection of the earthworm, cockroach and frog ; life-history of the mosquito ; a microscopical study of the chief animal tissues from fresh or prepared preparations of muscle, nerve, cartilage, bone, blood and connective tissue ; the microscopical study of the earthworm by means of fresh preparations and transverse sections ; a microscopical examination of the kidney, liver, spinal cord, stomach, ovary and testis of the frog. The skeleton of the frog.

The osteology of the rabbit (the skull of the dog may be substituted for that of the rabbit) and the dissection of the alimentary, vascular and reproductive systems of the rabbit or squirrel or rat.

B.—The dissection of plants and parts of plants ; the preparation, simple staining and study of microscopical sections of plants. A practical study by microscopical examination and otherwise of *Spirogyra*, *Ulothrix*, bacteria, yeast, *Mucor*, a moss, a fern, and the vegetative and reproductive organs of Angiosperms treated in an elementary manner.

The description of a flowering plant and its parts in semi-technical language.

(Where fresh material cannot be obtained recourse should be had to prepared specimens.)

*Text-books suggested—*

1. PARKER AND BHATIA : Elementary Course of Practical Zoology. (Macmillan.)
2. HOLMES : Biology of the Frog (fourth edition).
3. MARSHALL and HURST : Practical Zoology. (Murray.)
4. RANGACHARI : Handbook of Botany for India. (Varadachary & Co., Madras, 1925.)
5. HUXLEY : Elementary Physiology. (Macmillan.)
6. SHIPLEY : Life. (Ditto.)
7. BAHL, K. N. : Indian Zoological Memoirs. I, *Pheretima*, (Methodist Publishing House, Lucknow, 1926), Re. 1-8-0.
8. SMITH, OVERTON and OTHERS : Text Book of General Botany, second edition. (Macmillan & Co.)
9. WELLS and DAVIES : Text-book of Zoology, 7th edition (University Tutorial Press).

APPENDIX.

*Instructions for the teaching of Biology.*

1. The teacher must consider the purpose for which he teaches Biology—to prepare students for the university, for medical and forest colleges, and for more intelligent and more joyful living. Biology deals with the world of life surrounding the student, and every effort should be made to present Biology as a living subject, rather than as a vast mass of unrelated and (to the students) often meaningless facts to be memorized.

2. Teachers may take more liberty in teaching Biology than has been considered possible in the past. They should feel that they are not too rigidly bound by the syllabus. Much of what is commonly accepted as the interpretation of the syllabus, and as the proper content of Biology, is a tradition from the past. Teachers may, to a much larger extent, determine for themselves what they are to regard as the proper things to include in their teaching, and the proper emphasis to be given to these things; the syllabus will then become a friendly guide.

3. The syllabus is a record of work that ought to be covered, and the teacher may take up the various topics in whatever order he thinks best.

4. The additional items in the new syllabus are not intended to enlarge the syllabus, but to shift the emphasis given to the various parts of it. For instance, it is not intended that the cockroach shall be studied in minute detail, but that it shall be made the basis for acquaintance with the great assemblage of arthropods. The mosquito is to illustrate metamorphosis, and is used because of the great importance of mosquitoes to man, because it can be observed anywhere, and because it can be readily reared in the laboratory. The mosquito is to illustrate also the carrying of disease by insects, and the malaria-parasite is an illustration of a disease-producing organism transmitted by an insect. The economic and bionomic importance of these animals is to be emphasized, rather than complete details of their structure.

Likewise, it is intended to allow considerable freedom to the teacher by permitting the use of mammalian types that are most readily available. The purpose is to become acquainted with the

characteristic features of mammalian anatomy, rather than with minute details of one animal only to the exclusion of all others.

In Botany more emphasis should be put on what plants do, and how they work, than on extensive study of various growth forms which have little meaning for the students unless correlated with the great problems of plant economy. Moss is added to the syllabus as a simple, clear and easily accessible plant illustrating sex organs and alteration of generations ; it should be treated from this point of view, and no effort should be made to consider its anatomy in the detail usually regarded necessary in the fern.

### DRAWING.

There will be two papers, each of three hours' duration : the first paper on Solid Geometrical Drawing and the second paper on Free Arm Memory Drawing.

The second Drawing paper shall consist of two parts (a) a drawing from a group of objects placed before the class and (b) a question based entirely on memory. The number of marks of (a) and (b) should be equal.

#### *Syllabus—*

*Free Arm.*—In Pastels on Tinted Paper or Water Colours on white Cartridge paper.

Progressive work in groups of the common objects listed for High Schools such as—

Plate of Oranges, Tomatoes and Bananas ; Candle-stick and Matches, Ink-pot and Pen, Gloy Bottle and Brush ; Bundles of Fire-wood ; Glass of Water or Milk, Chinese Lantern, Liquids in Bottles ; Umbrellas, etc.

*Nature Study (Advanced).*—The more difficult Flowers, Bunches of Flowers, Leaves with Fruit and Flowers, Compound Leaves.

The above, which is but suggestive, will involve instruction in the art of blending colours, colour harmonies, colour schemes and shadows, together with technicalities such as tint-softening, blending, direct colouring, light tint on dark and dark on light, use of opaque colours and backgrounds.

*Memory Drawing.*—(a) Objects such as listed above which may be placed before students for a limited period, after which the objects shall be taken away and the drawing made.

(b) The drawing of some familiar and common objects entirely from memory.

A number of small objects may be placed once a week on a covered up tray, exposed, say, for ten seconds, and the class be asked to write down as many objects as they remember to have seen.

*Text-books recommended.*—Pastel work, vols. I and II, by H. A. Rankin. (Messrs. Isaac Pitman & Sons.) Price Rs. 4 per volume.

*Materials.*—As for the High School Examination of 1934 (Free Arm).

*Geometrical.*—Solid Geometry, simple solids, plans, elevations, sections and sectional elevations of such, isometric and orthographic projection, elementary perspective drawing, and all forms of Plane and Diagonal Scales.

*Text-books and Materials.*—As for the High School Examination of 1934 (Geometrical).

Book recommended for reference by teachers—

As for the High School Examination of 1934.

### ECONOMICS.

There shall be two papers of three hours each. The first paper shall cover Production, Consumption and Taxation, and the second paper Exchange and Distribution.

#### Introductory.

Subject-matter. Relation to other sciences. The development of Economic life.

#### Production.

Relation between wants and production. The factors of production.

*Land.*—Natural resources of India. Soil and Climate. Sources of power. Raw materials.

*Labour.*—Density and distribution of population in India. Health and vital statistics. Occupations.

*Capital (fixed and circulating).*—Buildings and machinery. Means of communication and transportation in India. Irrigation.

*Organization (management plus enterprise).*—Combination of the factors of production in village industries and in factories. Efficiency of the factors of production. Different uses and how efficiency increases. Efficiency of labour increased by education. Division of labour and specialization of machinery. Large-scale production and its limitations.

Diminishing and increasing returns. Development of industrial organization. Its relation to means of transportation. Accompanying changes in rural industries and in agriculture in India. Extensive and intensive cultivation.

#### Exchange.

*Barter.*—Conditions of barter. How both parties gain in utility by exchange.

Exchange by sale and purchase. Demand and supply schedules and curves. Balancing of demand and supply in a local market. Relation of price to expenses of production. Changes in the expenses of production. The development of markets. Causes of the extension of markets. India's imports and exports.

The machinery of exchange. Money. Kinds of functions of money. Standard and token coins. Monetary standards (single and double). Gresham's law. Convertibility of paper money in India. Credit and Credit Instruments. Hundies and Cheques. Main types of Indian banks and their functions. The *sahukari* and *sarafi* systems. All the above should be illustrated by Indian examples. (*Foreign exchanges and the history of Indian currency and banking are excluded.*)

#### Distribution.

The problem of distribution.

*Rent.*—The law of rent as applied to India. Land tenure in the United Provinces.

*Salaries and wages.*—Real and money wages. Wages as determined by supply and demand of labour. The standard of living. Mobility of labour in India. Influence of social customs.

*Interest.*—Net and gross interest. Mobility of capital in India. Principles of co-operative credit and its advantages for India.

*Profits.*—As the reward of enterprise. The field for enterprise in India.

#### Consumption.

*Utility.*—Marginal and total utility. Law of diminishing utility. Law of demand. Elasticity of demand.

Satisfaction as the end of all economic activity. Wants and their classification. Division of income among different items of expenditure. Family budgets. Relation of saving to spending. The social side of spending.

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**Taxation.**

A description of the taxes and other sources of revenue and items of expenditure of the Imperial Government, of the United Provinces, and of the District Boards and Municipalities of the United Provinces ; simple distinction between direct and indirect taxes. (Nothing of the theory of taxation is to be taught.)

NOTE.—Candidates may be required to draw charts, graphs and maps in the written examination, to frame budgets and analyse them, and to solve problems relating to costs of production.

The following books should be consulted :—

1. *Carver and Carmichael*.—Elementary Economics. (Revised edition.) (Ginn & Co.)
2. *Moreland*.—Introduction to Economics for Indian students. (Macmillan & Co.)
3. India in 1929-30 (the latest edition of the publication available in July, 1931 being recommended), published by the Central Publicity Office. (Chapters dealing with economic progress only are to be read.)
4. *P. Banerjee*.—A study of Indian Economics (third edition, 1928). (Macmillan & Co.)
5. The chapter on the United Provinces in the appendix to the Report of the Royal Commission on Agriculture.
6. *E. C. Bhatt*y.—A handbook of practical and written work in economics. (Indian Press, Allahabad.)

Teachers should also consult—

1. *V. G. Kale*.—Indian Economics. (Aryabhusan Press, Poona.)
2. *Marshall*.—Economics of Industry. (Macmillan & Co.)
3. *Clay*.—Economics for the General Reader. (Macmillan & Co.)
4. *Jack*.—Economic Life of a Bengal District. (Clarendon Press, Oxford.)
5. *Mann*.—Life and Labour in a Deccan Village. (Oxford University Press.)
6. *B. G. Bhatnagar*.—Bases of Indian Economy. (Ram Narain Lal, Allahabad.)
7. *Lettice Fisher*.—Getting and Spending. (Collins' Clear Type Press, London.) 3s. 6d.
8. *Jathar and Beri*.—Indian Economics (2 volumes). (Oxford University Press.)

9. *Fairchild*.—Elements of Economics.
10. *F. H. Robinson*.—Elements of Economics, Books I and II.
11. *J. P. Singhal*.—Elements of Economic Principles. (University Book Dépôt, Agra.)
12. *Thomas*.—Elements of Economics. (The Gregg Publishing Co.)
13. Report on an enquiry into working class budgets in Bombay by G. Findlay Shirras. (Government of Bombay Labour Office.)
14. R. K. Mukerji.—Rural Economy of India. (Longmans Green & Co.)

Teachers should give facts and figures from the latest edition of the Indian Year Book ("Times" Press).

#### Practical work.

Teachers should take out students to study small industries, markets and conditions of living in both city and country. The principles should be illustrated from these studies. The following is the minimum amount of practical work that should be done by students :—

- (1) Two budgets of consumption : one of an artisan, one of a cultivator, if possible, with the student's own suggestions for improvement.
- (2) Two statements showing the expenses of production, for one month, or a longer period, or for a fixed quantity of product of two small industries, with suggestions for the improvement of the industry.
- (3) Four diagrams illustrating the above four statements.
- (4) Two maps representing economic conditions in India or parts of India.

#### Written work.

Teachers should insist on as much written work as possible. The following methods are suggested :—

**NOTE.**—Teachers should not usually dictate notes, but should require students to write out their own notes after each lecture from rough notes taken in class and from memory. These notes should be inspected and corrected by the teacher.

**Questions.**—At the beginning of the lecture period teachers should frequently give out a single question on the work of the day before and allow the student 5 or 10 minutes to write out the answer, which should be corrected and returned to the students.

**Essays.**—Occasional essays may be assigned.

The following written work is the minimum to be done by each student :—

- (1) Two long examinations of at least 2½ hours each or six one period tests, or one such examination and three such tests.
- (2) Ten questions set in class to be answered in about ten minutes each.
- (3) Two essays of about ten pages, or four essays of about five pages. (One long essay and two short essays are advised.)

In the case of *private candidates* double the number of essays *plus* a description of a market or fair and of a cottage industry or a Co-operative Society may be submitted in place of items no. (1) and (2) of the written work.

#### CIVICS.

There will be two papers of three hours each : the first paper on Civic Theory and the second paper on Indian Civics.

##### *Paper I.—Civic Theory.*

##### *Syllabus—*

Nature of society. The state in relation to society. Functions and structure of government, forms of government. The place of local institutions in political life. Meaning of citizenship. Benefits from society, state or local institutions to the citizen. Duties and rights of citizenship. A citizen's participation in the life of his town, his province, his country. A citizen's relations with non-political associations like the colleges, clubs, religious organizations, co-operative societies, etc.

##### *Books recommended—*

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|----------------------|----|--|
| 1. Raleigh           | .. | .. Elementary Politics. (Oxford University Press.)                                 |
| 2. Lay               | .. | .. Citizenship.  |
| 3. Sir Henry Jones   | .. | .. Principles of Citizenship.  |
| 4. S. V. Puntambekar | .. | .. An Introduction to Civics and Politics. (The Indian Press, Limited, Allahabad.) |

##### *Paper II.—Indian Civics.*

##### *Syllabus—*

Structure of Indian government, central and provincial. Working of Indian government. Indian municipalities, district boards, village institutions, with particular reference to those of the United Provinces

of Agra and Oudh. Education in India. Indian social life. Cultural movements in Modern India. National movements in Modern India.

*Books recommended—*

1. Marris and Garner .. Civil Government.
2. G. Anderson .. British Administration.
3. S. M. Bose .. Working of the Indian Constitution. (Oxford University Press).

**HISTORY AND ALLIED GEOGRAPHY.**

Candidates may choose from the following groups of two papers each, each paper being of three hours.

(N.B.—Candidates are expected to draw freehand maps of India and Great Britain and Ireland.)

**Group A.**

*Paper I.*—Indian History from the earliest times to 1919.

*Paper II.*—British History, 1485—1919.

**Group B.**

*Paper I.*—Indian History from the earliest times to 1919.

*Paper II.*—European History, 1453—1919.

*Alternative sets of books recommended for Paper I under Groups A and B :—*

**Set I.**

Srinivasachari and Ramaswami Aiyangar : A History of India, Parts I, II and III. (Srinivas Varadachari & Co., 4, Mount Road, Madras.)

*or*

**Set II.**

1. Imperial Gazetteer, Vol. II.
2. LANE-POOLE, S. : Mediæval India (Story of Nations Series). (T. Fisher Unwin, Ltd.)
3. ROBERTS, P. E. : Historical Geography of the British Empire, Vol. VII, Parts I and II. (Clarendon Press, Oxford.)

*or*

**Set III.**

1. AIYANGAR, R. : Pre-Musalman India. (Longmans, Green & Co.)
2. GARRETT AND KOHLI : The Muhammadan Period. (Longmans.)
3. RUSHBROOK WILLIAMS : The British Period. (Longmans.)

*Books recommended for Paper II under Group A—*

1. WARNER AND MARTEN : Groundwork of English History. (Blackie & Son, Ltd.)
2. TOUT, T. F. : History of Great Britain, III. (Longmans, Green & Co.)
3. R. B. MOWAT : A New History of Great Britain. (Oxford University Press.)
4. S. R. GARDINER : A School Atlas of English History. (Longmans, Green & Co.)

*Books recommended for Paper II under Group B—*

1. RAMSAY MUIR : Atlas of European History.
2. A. J. GRANT : History of Europe. (Longmans, Green & Co.)
3. THATCHER AND SCHWILL : History of Europe. (John Murray, London.)
4. J. H. ROBINSON : History of Western Europe. (Ginn & Co., Boston, New York, U. S. A.)

**HISTORIES OF GREECE AND ROME AND ALLIED GEOGRAPHY.**

There will be two papers of three hours each.

*Paper I.*—History of Ancient Greece.

*Books recommended—*

1. EDMONDS, C. D. : Greek History for Schools. (Cambridge University Press.)
2. J. B. BURY : Greek History for Beginners.
3. E. ABBOT : Pericles. (G. Putnam & Sons.)

*Paper II.*—History of Ancient Rome up to 476 A. D.

*Books recommended—*

1. BRYANT, E. E. : A Short History of Rome. (Cambridge University Press.)
2. SHUCKBURGH : Augustus.
3. SHUCKBURGH : A Short History of Rome for Beginners.

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**GEOGRAPHY.**

There will be two papers of three hours each. The first paper will contain questions on Part I of the syllabus and the second paper on Parts II and III of the syllabus.

*Syllabus—*

I.—World Geography with an intensive study of the regional geography of Eurasia and North America *compared*, or of the three southern continents *compared*.

NOTE.—Teachers will be expected throughout to develop the human side of Geography, including the relations of Geography and History.

II.—Study of survey\* maps with special reference to 1,000,000 Survey of India and Adjacent Countries Series, sheet no. 43 (Srinagar) or no. 52 (Leh), or no. 53 (Delhi and Simla); also 1 inch Survey of India Map no. 63K/12. Study of the principles of the chief map-projections, such as Cylindrical (Mercator), Orthographic, Stereographic, Spherical, Conical, Elliptical (Mollweide). Study of the weather maps published by the Meteorological Office, Simla, with special reference to the maps for January and July of the two years of the Intermediate course, and of other distribution maps. Colleges should subscribe for the daily weather maps published by the meteorological Office, Simla. Annual subscription Rs. 24.

The work should show that outdoor geographical studies, including practical map-work, have formed a feature of the course.

III.—Economic Geography with special reference to India. The world position of India; its natural resources; its economic development. The general relation between geographic factors and the production of the major raw materials and food-stuffs. Sources of power. Factors affecting transport, exchange of commodities and the localization of major industries.

The world distribution of the following vegetable products :—

Wheat, rice, tea, coffee, vine, cotton, jute, sugar, rubber, tobacco. Conditions of their growth.

*Books recommended—*

I.—Russell : North America (Oxford Press). . 10s. 6d.

Rodwell-Jones and Bryan : North America (Methuen). 12s.

Chisholm : Europe. Vols. I and II (Stanford). 15s. each.

Keane : Africa. Vols. I and II. (Stanford). 15s. each.

Mackinder : Britain and the British Seas (Oxford Press). 10s. 6d.

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\* Survey maps are obtainable V.-P. P. from the Officer in charge, Survey offices, Wood Street, Calcutta.

- George : Relations of History and Geography (Oxford Press). 5s.
- Little : The Far East (Oxford Press). 10s. 6d.
- Griffith Taylor : Australia—Physiographic and Economic (Clarendon Press.) 3s. 6d.
- McMunn and Coster : A Regional Geography of Europe. (Oxford Press). 4s. 6d.
- Unstead and Taylor : Regional and General Geography for Students (Philip). 7s. 6d.
- Leonard Brooks : New Regional Geography, Book IV. The World (London University Press). 7s. 6d.
- May be used as text-books by the students.
- Shannon : South America (Methuen). 17s.
- Lyde : Europe (Macmillan). 10s. 6d.
- Unstead : Europe of To-day (Sadgwick and Jackson). 4s.
- Stamp : Asia (Longmans). 27s. 6d.
- II.—Esson and Philip : Map-reading Made Easy (Philip). 3s. 6d.
- Dickson : Maps, how they are made, how to read them (Bacon). 6d.
- Young and Fairgrieve : A Class-book of Practical Geography (Philip). 2s. 6d.
- Simmons and Richardson : An Introduction to Practical Geography (Macmillan). 4s.
- Unstead : Practical Geography (Oxford Press). 4s.
- Mort : An Elementary Practical Geography (Blackie). 2s. 6d.
- Ormsby and Jamison : Mathematical Geography. Vol. I (Pitman). 5s.
- Davis : Elementary Meteorology (Ginn). List price \$2.50.
- III.—Chisholm : Commercial Geography (Longmans). 25s. (New edition).
- Curr : Commercial Geography (Black). 4s.
- Lyde : Man and his Markets (Macmillan). 3s.
- Herbertson : Man and his Work. 1s. 6d.
- Goodchild : Geography and Man (Ram Narain Lal, Allahabad). Rs. 2.

Statesman's Year Book (Macmillan). } Every two or three  
20s. } years.  
Whitaker's Almanac. 4s.

Indian Year Book ("The Times of India" office). Rs. 5-4  
To be used as a text-book.

Imperial Gazetteer of India. Vols. III and IV (Oxford). 7s  
6d. each.

Atlas of Commercial Geography (Cambridge University  
Press). 3s.

The Oxford Economic Atlas (Oxford Press). 6s.

Stamp : Intermediate Commercial Geography. Vols. I  
and II (Longmans).

E. C. and L. D. Stamp : Practical Atlas of Modern  
Geography (George Bell & Sons). Re. 1-12.

*Additional reference books :—*

Lake : Physical Geography (Cambridge University Press).  
12s.

Salisbury : Physiography for Schools. Shorter Course  
(Murray). 6s.

Davis : Elementary Physical Geography (Ginn). 5s. 6d.

Tarr : Elementary Physical Geography (Macmillan). 7s. 6d.

Mill : The Realm of Nature (Murray). 5s.

Philip's sets of maps of the various continents and of India  
*with explanatory handbooks.*

Philip's sets of synthetic maps (for students' use). 1s. per  
packet.

Philip's Modern School Atlas of Physical, Political and  
Commercial Geography. 7s. 6d.

**LOGIC.**

There will be two papers of three hours each : the first paper on  
Deductive Logic and the second paper on Inductive Logic.

N. B.—Teachers are expected to lay adequate emphasis on written work and appli-  
cation of logical principles to problems.

**Deductive Logic.**

The following syllabus is prescribed :—

Definition, scope and value of Logic. Nature of thinking. The  
laws of thought. The relation of thought and language. Terms and

their classification. Denotation and Connotation of terms. The predicables. Formal division and definition. Propositions, their import. Reduction of statements to logical form. Distribution of terms. Nature and forms of inference. The opposition of propositions and various forms of deduction. The syllogism, its figures and moods. Reduction, direct and indirect. Hypothetical, disjunctive and mixed syllogisms. The Dilemma, Enthymeme, Sorites and Epicheirema. Function and value of syllogism. Analysis of deductive arguments. Fallacies.

#### Inductive Logic.

The following syllabus is prescribed :—

The nature and presuppositions of inductive inference. Causation, its significance and importance in induction. Observation and experiment. Classification, nomenclature, and terminology. Hypothesis. Imperfect induction—simple enumeration and analogy. Methods of scientific induction. The deductive method of investigation. Analysis of inductive arguments and application of inductive methods. Explanation and establishment of laws. The relation of induction to deduction. Fallacies.

Books recommended (*not prescribed*) to indicate the standard of treatment of the topics prescribed in the syllabus :—

1. The Elements of Logic : Robert Latta and Alexander Macbeath (Macmillan & Co.).
2. Intermediate Logic : Welton and Monahan (University Tutorial Press, London).
3. Elementary Logic, Deduction and Induction : Diwan Chand. (Narayan & Co., Meston Road, Cawnpore).
4. Inductive Logic : P. K. Ray.

#### A MODERN INDIAN LANGUAGE.

##### HINDI.

There will be three papers, each of three hours' duration : the first paper will be set on the prescribed Poetry and Alankar, the second paper on the prescribed Prose and Drama, and the third paper on Unseen and Composition. Questions on History of Hindi literature and critical questions will be distributed over the first and second papers.

**Paper I.—Poetry and Alankar.**

The following syllabus on Rhetorics and Prosody is prescribed :—

(i) शब्दालंकार :—वक्रोक्ति, अनुप्रास, यमक, इलेष ।

अर्थालंकार :—उपमा, रूपक, अनन्वय, अपह्नुति, प्रतीप, स्वरण, भ्रांतिमान, संदेह, उत्प्रेक्षा, व्यतिरेक, उल्लेख, दृष्टांत, अतिशयोक्ति, प्रतिवस्तु उपमा ।

व्याईभाव, रसों के नाम और परिचय ।

(ii) मात्रिक :—चौपाई, रोला, रूपमाला, गीतिका, हरिगीतिका, बरवै, दोहा, सारठा, कुंडलिया ।

वर्णवृत्त :—इंद्रवज्रा, उपेन्द्रवज्रा, वंशस्थ, वसंततिलका, सवैया (मदिरा, मत्तगयंद, सुमुखी, सुंदरी) ।

मुक्तक :—मनहर (कवित्त), घनाक्षरी ।

Text-books prescribed :—

1. Rambahori Shukula—काव्य कलाधर (omitting अँसन by Jai Shanker Prasad and pages 180—183), (Nand Kishore and Bros., Benares) Re. 1 annas 8.
2. Din Dayal Giri.—अन्योक्ति कल्पद्रुम (Nagari Pracharini Sabha, Benares).
3. बक संहार and वन वैभव (Sahitya Sadan, Chirgaon, Jhansi). Annas 8.

**Paper II.—Prose and Drama.**

Text-books prescribed :—

1. Satya Narain Kaviratna—उत्तर रामचरित (Ratnashram Press, Agra).
2. Shyamsundar Das—गद्यकुसुमावली (Indian Press, Allahabad).
3. Shilimukh—आधुनिक हिन्दी कहानियां.

**Paper III.—Unseen and Composition.**

Books recommended for Alankar and History of Hindi Literature :—

1. Ram Ratna—अलंकार प्रबोध (Ratnasram, Agra).
2. सरलपिंगल by Ram Chandra Sukul, 'Saras' (Ram Narain Lal, Bookseller, Allahabad).
3. Badri Nath Bhatta—हिन्दी (Ganga Pustak Mala, Lucknow).
4. Kaye—Hindi Literature (Heritage of India Series).
5. Lala Bhagwan Din—अलङ्कार चन्द्रिका (Benares).
6. Rama Shankar Prasad—हिन्दी साहित्य का संक्षिप्त इतिहास (Lala Ram Narain Lal, Allahabad).

The following books are recommended for supplementary reading :—

1. Tulsidas—कवितावली (N. P. Sabha, Benares).
  2. Shridhar Pathak—एक लतासी बेगी (Padmakot, Allahabad).
  3. Ayodhya Nath Sharma—एक सुकतादली (Gautam Bros., Cawnpore).
  4. Satya Jiwan Verma—चित्रावली (Ram Narain Lal, Bookseller, Allahabad).
  5. Ramchandra Shukla—अशाङ्क (N. P. Sabha, Benares).
  6. Vijogi Hari—अन्तर्नाद
  7. Pratap Narayan Misra—निबन्ध नवनीत (Abhyudaya Press, Allahabad).
  8. Padum Lal Bakshi—पञ्चपात्र (Gandhi Hindi Pushtak Bhandar, Allahabad).
  9. Kali Das Kapur—साहित्य समीक्षा (Indian Press, Allahabad).
  10. Narottam Das Swami—मीरा मंदारकनी (University Book Depot, Agra).
  11. Dr. Lakshman Swarup—मोलिहर (Saraswati Asram, Lahore).
  12. Premchand—प्रेमकुंज (Nand Kishore and Bros., Benares).
- (N.B.—Students are expected to read at least three books out of those recommended for supplementary reading.)

### URDU.

There will be three papers in this language, each of three hours' duration ; the first paper will be set on the prescribed Prose, the second on the prescribed Poetry, and the third on Unseen and Composition. Candidates are expected to have a knowledge of the outlines of the History of Urdu literature. Critical questions will be set in the first and second papers,

*Paper I.*—Prose and Grammar.

Books prescribed :—

- (1) یورپ میں علم from page 2 سخنندان پارس - حصہ اول - محمد حسین آزاد up to page 54 ending with کسی ناطہ گفتہ باشد
- (2) فلاسفہ یونان کہتے ہیں from [بحیات - نظم اردو کی تاریخ - محمد حسین آزاد] up to موتوں سے پیر دیکھ
- (3) the شعر العجم - حصہ ۲ - باب اول - شاعری کی حقیقت - شبلی نعمانی

- امید کی خوشی (c) تکمیل (b) تعصب (a) مضامین سر سید (4)  
بحث و تکرار (g) انسان کے خیالات (f) خون غرضی (e) سراب حیات (1)  
خط و کتابت (j) اخلاق (i) اپنی مدد آپ (h)  
(فصل اول تا ششم و ہشتم تا دہم) رویاے صادقہ - ڈاکٹر نذیر احمد (5)  
عام میان و عام بزرگ - Grammar  
*Book recommended.*—Majma-ul-Fawaid, by Maulvi Syed Hamid  
Ali (Rai Sahib Ram Dayal Agarwala, Allahabad).  
*Paper II.*—Poetry and Grammar—

- ( ۱ ) سودا - آیا عمل میں فیض سے قہری یہہ کارزار  
سودا - اب سامنے میرے جو کوئی پیرو جواں ہی (شہر آشوب)  
Omit lines 14, 15, 16, 26, 48, 49, 57, 58, 62, 63, 76, 77, 78, 86, 94.  
( ۲ ) ذوق - ساروں میں دیا او مہ شوال دکھائی  
ذوق - راہ را کیا معتدل ہی باغ عالم کی ہوا  
( ۳ ) - نذر - آئینہ سخن کے لیئے ہو گھر آب - میں  
( ۴ ) امیر - فصل گل آئی ہوا گلزار جنت بوستان  
( ۵ ) انیس - یارب چمن فظم کو گلزار ارم کو  
( ۶ ) وحید - اے نلم دامن کاغذ یہ گریز ویز ہو رہی  
( ۷ ) سرور جان آبادی - حسرت دیدار - پیر بہوشی

خاک ہند  
سین دھوڑدون  
گوہال کرشن گوہلے  
راماین کا ایک سین

( ۸ ) - چک بست

شمع و شاعر  
تصویر دون  
گورستان شاہی

( ۹ ) اقبال

( ۱۰ ) - جوالا پرشان برق - مثنوی بہار (از گلستا، پنج)

Thirty-five ghazals, seven from each of the following poets :—

( ۱۱ ) - پیر - درد - مصحفی - مرمن - رند -

Ghazals beginning with the following opening lines are pre-  
scribed :—

میر —

( ۱ ) جو جو ظام کیئے ہیں تم نے سو سو ہم نے اُتائے ہیں

( ۲ ) اشک آنکھوں میں کب نہیں آتا

- ( ۳ ) یہہ جو چشم پو آب ھیں دوفوں  
 ( ۴ ) قتل کیئے پر غصہ کیا ھی لاش میڙی اُتھوانے دو  
 ( ۵ ) میڙ دریا ھی سنڌ شعر زبانی اُس کی  
 ( ۶ ) هستی اپنی حباب کی سی ھی  
 ( ۷ ) اے حب جاہ دالو جو آج ناجور ھی

## — درد —

- ( ۱ ) اسپر پو مہوس ایتنا نہ فاز کرنا  
 ( ۲ ) عاشق بے دل قرا یاں تک تو جي سے سیر تھا  
 ( ۳ ) اپنی قسمت کے آگے داغ ھوں میں  
 ( ۴ ) رکھتی ھی میڙے غنچہ دل میں وطن گره  
 ( ۵ ) یہہ تحقیق ھی یا کہ افواہ ھی  
 ( ۶ ) مرا جي ھی جب تک تری جستجو ھی  
 ( ۷ ) مڑگاں تہ ھوں یا رگ تاک بریدہ ھوں

## — مصدفی —

- ( ۱ ) نظارہ کردں دھر کی کیا جلوہ گری کا  
 ( ۲ ) مرض عشق سے اب کے جو سنبھل جاؤنگا  
 ( ۳ ) عمر آخر مت گیا داغ اُس دل رنجور کا  
 ( ۴ ) چاک ھی موج تبسم سے کریمیاں بہار  
 ( ۵ ) نہ گیا کوئی عدم کو دل شاداں لیکر  
 ( ۶ ) رہا ھی گل سے انزوں بیم تا راج خزاں مجھکو  
 ( ۷ ) نہ وہ راتیں نہ وہ باتیں نہ وہ قصہ کہانی ھی

## — مومن —

- ( ۱ ) غیروں پہہ کھل نہ جائے کہیں راز دیکھنا  
 ( ۲ ) وعدہ وصلت پہ ھو دل شاد کیا  
 ( ۳ ) لے اُڑی لاشہ ھوا لاغر یہہ بس تن ھو گیا  
 ( ۴ ) اگر غفلت سے باز آیا جفا کی  
 ( ۵ ) خوشی نہ ھو مجھے کیوں کہ قضا کے آنے کی  
 ( ۶ ) دفن جب خاک میں ھم سوختہ سامان ھونے  
 ( ۷ ) سینہ کو بی سے زمین ساری ھلا کے اُٹنے

— و ن

- ( ۱ ) جو جس کے حق میں سمجھا وہ بہتر دیا  
 ( ۲ ) کوہِ فرہان سے مسکنوں سے بیاباں چیتا  
 ( ۳ ) ہر ایک زبان پہ تو حاملِ کلام آیا  
 ( ۴ ) کیونکہ نہ ہوئے خاک کے پتلے کو جان عزیز  
 ( ۵ ) چلتی رہی اس کوچہ میں تلوار ہمیشہ  
 ( ۶ ) سنی سرگوشیاں غیروں سے اشارے دیکھے  
 ( ۷ ) آج گلشن میں کزن آقا ہی

Grammar—علم بیان و علم بدیع

*Book recommended.*—Majma-ul-Fawa'id by Maulvi Syed Hamid Ali (Rai Sahib Ram Dayal Agarwala, Allahabad).

*Paper III.*—Unseen and Composition.

The following books are recommended for supplementary reading and they indicate the standard of the passages to be set as "unseen" :—

1. مرزا رسوا - شریف زادہ (National Press, Allahabad).
2. چک بست مضامین چک بست (Indian Press, Allahabad).
3. الیاس بہنی - جذباتِ فطرت حصہ اول (قریب جدید)
4. by Mirza Muhammad Askari (Newal Kishor Press, Lucknow).

There will be three papers in each of the following languages. Each paper will be of three hours : the first paper will be set on the prescribed Poetry and Drama, the second on the prescribed Prose, and the third on Unseen and Composition. Critical questions will be set in the first and second papers.

### BENGALI.

#### Poetry.

1. *Kirtibas.*—Ramayan, Ajodhya Kanda.
2. *Rabindra Nath Tagore.*—Naivedya (Viswa Bharati Series).
3. *Karnarjuna* (drama), by Aparesh Chandra Mukhopadhyaya (Guru Das Chatterji & Sons, Calcutta). Re. 1-8.

#### Prose.

1. *Bankim Chandra Chatterji.*—Durgesh Nandini (novel).

2. *Ishanchandra Ghosh*.—Jatak, Volume I (nos. 1—25 and introduction).

3. *Hara Prasad Sastri*.—Bharat Mahila.

*Composition.*

*Rakhal Das Vidhyaratna*.—Bengali Composition. (Recommended.)

MARATHI.

*Paper I, Poetry.*—

- (1) आनन्द गीत Vol. I, by Ananda Krishna ji Jekade (Nagpur).
- (2) "Selections from 'Tukaram,'" as published in the latest edition of "Navnit".

*Paper II, Prose.*—

- (1) "Ragini (novel)," Volumes I and II, by Vaman Malhar Joshi (Manoranjak Grantha Prasarak Mandali, Bombay).
- (2) "Ashoka Charitra," by Vasudeo Govind Apte, published by the Manager, "Anand" Poona City. Re. 1-8.

*Paper III, Unseen and Composition.*

*Books recommended*—(1) मराठी वाक्प्रचार व ह्मणो, by Vidyadhar Vaman Bhide (Chitra Shala Press, Poona City).

(2) मराठी ची सजावट in two volumes, by G. G. Mujumdar, teacher, Sangli High School, Sangli.

GUJARATI.

*Paper I, Poetry and Drama*—

- (1) "Kavyamadhurya," selected by H. G. Anjaria.
- (2) "Jaya-ane-Jayant," by N. D. Kavi.

*Paper II, Prose.*—

- (1) "Sarasvatichandra," Part II, by Govardhanram M. Tripathi (N. M. Tripathi, Bombay).
- (2) "Kavita-ane-Sahitya," by Sir Ramanbhai M. Nilkanth, Vol. I (pages 1—72). (Gujarat Vernacular Society, Ahmedabad).

*Paper III. Unseen and Composition.*

### A MODERN EUROPEAN LANGUAGE.

There will be three papers of three hours each. The first paper will consist of extracts from the prescribed Text-books, together with grammatical questions. The second paper will contain Unseen passages for translation from French into English ; these passages are not to be taken from the prescribed Text-books. The third paper will consist of a passage or passages of English prose to be translated into French.

#### French.

##### *Prescribed Text-books :—*

1. La Bucho (Le Crime de Sylvestre Bonnard) Anatole France (Oxford University Press).
2. Moliere, Le Bourgeois Gentilhomme.
3. French poetry for advanced students, by A. Watson Bain (Macmillan & Co.), of which poems numbered 2, 15, 23, 24, 30, 34, 35, 38, 43, 57, 61, 75, 102, 108 and 116 are prescribed.

##### *Grammar recommended :—*

French Grammar (Sonnenschein's Parallel Grammar Series) or Heath's Modern French Grammar. (Harrap.)

##### *Books recommended for rapid reading :—*

La Bastide Rouge (Elie Berthet), La Rose Blanche (Louis Enault) and La Vie de Polichinelle (Octave Feuillet), all of Siepmann's French series (Macmillan & Co.).

##### *Book recommended for French Composition :—*

Easy steps in French Composition, by Horsley and Bonner (Rivington).

### A CLASSICAL LANGUAGE.

There will be three papers of three hours each in each of these languages : the first paper will be on Poetry and Drama, the second paper on Prose and Unseen, and the third paper on Grammar, Composition and Translation into the classical language. Questions in Grammar relating to the text may be included in each of the first two papers, the number of marks assigned to such questions in each paper being not more than 20 per cent. of the total in the case of Sanskrit only.

## (a) Sanskrit.

*Paper I.—Poetry and Drama—*

(a) Raghuvamsha, Canto XIII (as in *Aṣṭapuspikā* by Nilkamal Bhattacharya or in any other edition).

(b) Kavya Kusumavachaya, by Mahendra Pratap Sastri (University Book Dépôt, Agra).

NOTES.—1. Students are expected to explain selected passages in their own Sanskrit.

2. No Prakrit passages shall be set for the examination.

*Paper II.—Prose and Unseen—*

(a) Prose—Dasakumara Katha—Purvapithika (Ram Prasad and Bros., Agra).

(b) Unseen—

1. रामायण संग्रह by Vanshidhara Sastri, Lucknow.

2. Harish Chandra, pages 110—148, of *Manohara Kāvya-mālā*, selected by Pandit Kailash Nath (Messrs. Moti Lal Banarasidas, Lahore).

3. Pravandha Prakash, by Dr. Mangal Deva Sastri (Indian Press, Allahabad), of which nos. 3, 6, 8, 10, 18 and 21 are to be read.

NOTE.—Easy passages from the abovementioned books and similar passages from other similar books should be set for translation.

*Paper III.—Grammar, Composition and Translation.**Books recommended :—*

1. Apte's Guide to Sanskrit Composition.
2. Kale's Higher Sanskrit Grammar.
3. Vidyā Bhushana's Sanskrit Grammar.
4. Bhandarkar's Second Book of Sanskrit.
5. Sanskrit Vyākaran Praveshikā, by Babu Ram Saksena (National Press, Allahabad).
6. Sanskrit Second Book, by Professor Ram Behari Lal, D. A.-V. College, Cawnpore.
7. Prabandha Prakash, by Dr. Mangal Deva Sastri (Indian Press, Allahabad), of which "Introduction," pages 1—9, should be read.

In addition to the course in Grammar prescribed for the High School Examination of 1934 the course in Grammar for the Intermediate Examination of 1934 shall consist of the following :—

The remaining declensions of all nouns and pronouns, conjugations of verbs of frequent occurrence in classical literature of all the *ganās* in all the *lakārās*, the use of *kārakas*, the *samasas*, and the *krit* and *taddhita* forms.

N.B.—Sanskrit must be written in Devanagari character.

(b) Arabic.

*Paper I.—Poetry and Unseen.*

Text :—

(a) حسان بن ثابت

- ١ عفت ذات الأصابع فالجواء -
- ٢ هل رسم دارسة المقام يباب -
- ٣ عرفت ديار زينب بالكثيب -
- ٤ صلى الله على الذين تقابعوا -
- ٥ ألا والله ما تدري هذيل -
- ٦ والله أنا لانفارق ما جدأ -
- ٧ وشق له من اسمه كى يجعله -
- ٨ ما بال عيني لا تنام كأنما -
- ٩ البيت حلفت بر غير ذي دخل -
- ١٠ تاوطني ليل يثرب أعسم -
- ١١ اظن عيينة أن زارها -
- ١٢ إلا يا قوم هل لما حم دافع -
- ١٣ أعرض عن العوراء أن اسمعتها -
- ١٤ لقد جدعت أذان كعب و عامر -
- ١٥ إذ الله حيا معشرا بفعالهم -
- ١٦ ولقد بكيت وعز مهلك جعفر -
- ١٧ لقد ورث الضلالة عن أبيه -
- ١٨ أبا لهب ابلغ بان مصمدا -
- ١٩ الله أكرمنا بنصر نبيه -
- ٢٠ هل المجد إلا السود العود والنديل -
- ٢١ أبك بك عيناك ثم تبادرت -
- ٢٢ الذين أذلن العشير فان تكن -

- و يثرب تعلم إننا بها - ٢٣  
وممسك بصداع الرأس من سكر - ٢٤  
سقتهم كذانة جهلا من عذاركم - ٢٥  
لو خلق اللرم انسانا يكلمهم - ٢٦  
ثوى بمكة بضع عشرة حجة - ٢٧

(b)	شعراء النصرانية	Page.	No. of lines.	Poet.
(1)	الذكو حاجتي أم قد كفاني	220	9	امية ابن ابي الصلت
(2)	الم نران البرد عود صدره	94	4	قحيصة ابن المصراي
(3)	بكيت لغرسان و حق لناظري	147	7	بواق
(4)	لتد نصحت لاثوام و ذلت لهم	616	9	ورقة بن نوفل
(5)	أ اجمع مكيتي السحر ار تكدلا	201	6	عمرو بن كلثوم
(6)	فلم تبصر لنا غطفان لما	208	11	زهيو بن حباب
(7)	لقيت تغاب كمصبة عان	243	9	فند الزماني
(8)	انما جاري لعربي فاعلموا ادننى غيالي	246	8	جساس بن موة
(9)	با كعب اذل او تصرت عاي	254	9	عبدالمسيح بن عساء
(c)	ديوان الحماسة			
	اذا المراء لم يدنس من اللرم عرضه	28	22	سمؤل بن عاديا
(d)	رياض الادب	147	6	حقيقة بنت عمر والباهلية
	كذا كغصنين في جهنومة سقا			
(e)	ديوان الخنساء	41	10	الخنساء بنت عمرو
	اعيني جودا ولا تجمدا			

Dr. A. S. Tritton's edition of these selections is approved.

Unseen.

The following book is recommended for supplementary reading and it indicates the standard of passages to be set as 'unseen' :—  
ابو بى by نادر الحكايات 1st half.

Paper II.—Prose and Unseen.

Text :—

(a) ابن خلدون (The biography of the Prophet.)

(b) Tajaribul Umam, Eclipse of the Abbaside Caliphate, volume I, pages 83 to 91. Imprisonment of Umm Musa, the stewardess, and appointment of Ibn Furat as Wazir, 310 to 311 Hijra, pages 202 to 246.

Unseen.

The following book is recommended for supplementary reading and it indicates the standard of passages to be set as 'unseen' :—

نواذر الحکایات by قلیوئی 1st half.

\* Paper III.—Grammar, Composition and Translation into Arabic.

Grammar :—

مدارج العربیة by M. Izzat Ullah (Chashmai Rahmat Book Agency, Ghazipur, U. P.).

NOTE.—Arabic words must be written in Arabic character.

(c) Persian.

Paper I.—Poetry and Drama.

Text :—

(1) دیوان حافظ Ghazals beginning with the following lines :—

- ( ۱ ) ایلا ایلا اساقی ادر کاس و نازلیا
- ( ۲ ) بیا که تصر امل سخت سست بنیادست
- ( ۳ ) چه بشنوی سخن اهل دل مگو که خطاست
- ( ۴ ) بنال بلبل اگم با صفت سو یاریست
- ( ۵ ) صوفی از پرتو می راز نهانی دانست
- ( ۶ ) حاصل کار که کون و مکان این همه نیست
- ( ۷ ) جان بے جمال جاسان میل جهان ندارد
- ( ۸ ) سالها دل طلب جام جم از ما می کرد

(2) دیوان نظیری 1st 15 Ghazals.

(3) قصائد سلمان ساوجی

- (a) اے سران ملک را شمشیر تو مالک رقاب
- (b) باد سحر گهی بهوای تو جان دعد
- (c) بدل رسیده سحر گاه در مقام حضور

(4) قصائد ظہیر ناری

- (a) سپیده دم چو شدم محرم سراے سوز

\* NOTE.—Alternative questions to the extent of 25 per cent. shall be set in this paper.

- (b) سپیده دم چو زند آب خیمه در گلزار  
 (c) شرح غم تو لذت شادی بجان دهد  
 (d) چون به زمین طلوعه شب گشت آشکار  
 (5) (Anwar-i-Ahmadi Press, Allahabad).  
 Paper II.—Prose and Unseen.

Text :—

1. جنگ نامه نعمت خان عالی
2. بطبع مردم from the beginning up to سرانجام شیخ علی حزین  
 بیگانه زیاده ملایمت نکند
3. که تازیان سلیمان دانند up to حالات هوشنگ from نامه خسروان
4. کدورتها بصفا up to از عنایات بیغایات الهی from توزک جهانگیری  
 مبدل گردید
5. سبکدوش خود را به آرامگاه جاوید رساند up to نبد از احوال مصنف—آئین اکبری

Unseen.

The following books are recommended for supplementary reading and they indicate the standard of the passages to be set as 'unseen' :—

1. Humayun Nama, by Gulbadan Begum.
2. فارسی جدید حصه سوم محمدعلی ایرانی
3. انتخاب تاریخ فرشته (Shanti Press, Allahabad).

\*Paper III.—Grammar, Composition and Translation into Persian.

Grammar—Candidates are expected to have a thorough knowledge of syntax ( نحو ) and rhetorics ( بیان و بدیع ). The following book is recommended :—

مخزن الفرائد, by Maulvi M. H. Nasiri, Chapters I—VII (Mission Press, Allahabad).

Students who offer Persian are required to have such a knowledge of the etymology of the Arabic language as will enable them to explain all Arabic words and phrases which may occur in the text-books and in the books recommended for rapid reading in Persian.

NOTE.—Persian words must be written in Persian character.

\*NOTE.—Alternative questions to the extent of 25 per cent. shall be set in this paper.

(d) Latin.

Prescribed course :—

I.—Text :—

- (1) CICERO : Pro Milone. (Oxford University Press).
- (2) LIVY : Book IX (Oxford University Press).
- (3) VIRGIL : Bucolics (Macmillan).
- (4) HORACE : Odes, Book IV (Macmillan).
- (5) SALLUST : Jugurthine War (Macmillan).

II.—Grammar:—Gildersleeve's Latin Grammar or Allen's Latin Grammar is recommended.

III.—Latin Prose Composition.

Book recommended :—

North and Hillard's Latin Prose Composition (Rivington).

(e) Greek.

Prescribed course :—

Text—

- (1) Thucydides, Book IV (Chaps. 1—41), (Macmillan).
- (2) Euripides Alcestis (Oxford University Press).
- (3) Homer Iliad I (Macmillan).

(f) Hebrew.

Prescribed course :—

I.—Text—SAMUEL : Book I.

PSALMS, I—LX.

II.—Genesis is recommended for rapid reading in connexion with Unseen.

III.—Grammar :—Duff's Hebrew Grammar is recommended.

**PHYSIOLOGY, HYGIENE AND CHILD-STUDY.**

*(For girls only.)*

**NOTE.**—The subject should be taught in such a way as to be of practical value to the students.

There will be two papers of three hours each : the first paper will contain questions on (1) Activities of the Modern Home, (2) Physiology and Hygiene, and (3) Public Health, and the second paper questions on Child-Study.

I.—Activities of the Modern Home.

- (1) To provide for the physical needs and development of the members of the family.
- (2) To provide for their mental, moral, and social needs.
- (3) To co-operate with the community for the better meeting of these needs.
- (4) To maintain the home on an economically sound basis so as to make possible the meeting of the above needs.

II.—The study of Physiology and Hygiene, especially from the point of view of the physical development of the child.

- (A) The cells, the supporting tissue and their structure.
- (B) The skeleton; bones, joints, the muscular system. A special study of the conditions making for the normal development of these systems, such as posture, etc.
- (C) Digestion and Nutrition.
  - (1) The organs and processes of digestion.
  - (2) The food needs of the body.
  - (3) The classes of food-stuffs.
  - (4) The diet of the pre-school and school child.
    - (a) Constipation as a special dietary problem of school children.
    - (b) Mal-nutrition:—how to detect and remedy it.
  - (5) Effect of cooking on food; method of cooking with special emphasis on methods of cooking food for children.
  - (6) Treatment of minor digestive ailments.
  - (7) Alcohol and drugs and their effect on the digestive system.
- (D) The excretory system—the skin, kidney, bowels. Health habits of children in relation to the above.
- (E) The circulation of the blood—the heart; arteries; veins; capillaries. The regulation of the blood supply. The composition of blood and its work in the body.

The problem of the child with the weak heart.
- (F) Respiration.
  - (1) The lungs; trachea; larynx; the composition of pure and impure air effect of breathing on air.
  - (2) Formation of proper breathing habits in children. Posture; special breathing exercises.
  - (3) Ventilation of the school and home.

(G) The nervous system and sense organs.

- (1) The nerves ; spinal cord ; brain.
- (2) The structure of the eye, ear, nose.
- (3) Health habits to promote the normal development of these organs.
- (4) Common defects of these organs—how to detect them.
- (5) Treatment of minor ailments and accidents.
- (6) The effect of alcohol and drugs on the nervous system and sense organs.

(H) Clothing.

- (1) Selection of clothing, specially for children.
- (2) Training of children as to care and cleanliness of clothing.

(I) Occupation, exercise, recreation, rest, sleep. Health habits to be established in children in the above.

(J) Precautions against common diseases.

- (1) Health habits which will protect the child from common diseases.
- (2) Health habits which will prevent the spread of infectious diseases.

III.—Public Health.

- A. Responsibility of the individual.
- B. Disposal of refuse and waste water. Drainage. Latrines.
- C. Water supply. Food supply.
- D. Prevention and arrest of infectious diseases.
- E. Gardens. Play-grounds. Open spaces.
- F. Modern movements for the education of society in the laws of health, e.g., "Child Welfare".

IV.—Child-Study.

The study of children's development from the point of view of physique, intelligence and character, based as far as possible on the observation of individuals and classes.

An elementary study of the means by which children acquire knowledge and skill, including such as the following :—

The senses and sense training : instincts and their relation to children's interests ; forms of activity and expression ; the function of play ; imitation and suggestion ; habits and their formation ; memory and

imagination ; interest and attention ; the formation of clear and connected ideas ; simple processes of reasoning ; growth of the will.

The aims and methods of discipline ; training in responsibility, in the right use of freedom and in the social duties.

*Books of reference :—*

1. \*Elementary Physiology, by W. B. Drummond. 2s. 2d. (Publisher, Arnold.)
2. \*Elementary Hygiene for India, by C. Beresford (Lahiri & Co., College Street, Calcutta).
3. Physiology and Hygiene, by G. D. Cathcart (Macmillan).
4. Elementary Physiology, by Bhatia and Suri (Longmans, Green & Co.).
5. Modern Psychology, by Meredith (Constable).
6. Dawn of Mind, by Drummond (Arnold).
7. Child-welfare, by Dr. S. K. Mukherji (Indian Press, Allahabad).
8. Physiology, by T. Huxley.
9. Social Psychology, by McDougall.
10. The Dawn of Character in the Child, by Edith Mumford (Longmans.)
11. The Child and His problems, by Alice Hutchison (Williams and Margate, 14, Henrietta Street, Covent Garden, London.)
12. The Child under Eight, by E. R. Murray and Henrietta Brown Smith (Edwin Arnold & Co., London).
13. Physiology, Public Health and Psychology, by Charles Banks (Macmillan & Co.).

*Physiology, Hygiene and Elementary Psychology.*

*(For boys only.)*

There will be three papers of three hours' duration each as follows :—

- Paper I—Section I—35 marks.  
" II—Sections II and III—30 marks.  
" III—Section IV—35 marks.

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The books marked \* indicate the scope of the work required in Physiology and Hygiene.

SECTION I.—PHYSIOLOGY AND PERSONAL HYGIENE.

- (a) The cells, the supporting tissues and their structure.
- (b) An outline study of the skeletal and muscular system and conditions for their normal development.
- (c) Digestion and nutrition—
  - (1) The classes of food stuff.
  - (2) The organs and processes of digestion.
  - (3) The food needs of the body under various conditions e.g., climate, age, occupation.
  - (4) Malnutrition and its detection.
  - (5) Effect of cooking on food.
  - (6) Minor digestive ailments.
  - (7) Alcohol, drugs, and spices, and their effect on the digestive system.
- (d) The excretory system—the skin, kidneys and bowels. Health habits in relation to the above.
- (e) The reproduction system treated in an elementary manner.
- (f) The organs and mechanism of blood circulation: The adjustment of the blood supply to the needs of the different organs of the body under various conditions, e.g., the supply of blood to—
  - (1) the stomach during the process of digestion.
  - (2) the skin during varying climatic and physical conditions.
  - (3) Haemorrhage and how to arrest it.
- (g) Respiration—
  - (1) The lungs ; trachea ; larynx.
  - (2) Formation of proper breathing habits in children. Postures and breathing exercises.
  - (3) Ventilation and its importance.
- (h) The structure and hygiene of the eye, ear and nose.
- (i) The temperature of the body and its regulation. Clothing.
- (j) Exercise, recreation, rest, sleep.

- (k) Precautions against common diseases, e.g., malaria, tuberculosis, cholera. The spread of disease by fleas, rats, lice, house flies.
- (l) Useful and harmful bacteria.
- (m) The care of the teeth.

## II.—PUBLIC HEALTH.

- (a) Responsibility of the individual.
- (b) Disposal of refuse and waste water, Drainage, Latrines.
- (c) Water supply. Food supply.
- (d) Prevention and arrest of infectious and contagious diseases.
- (e) Gardens. Play grounds. Open spaces.
- (f) Modern movements for the education of society in the laws of health, e.g., "Child Welfare".

## III.—HISTORY OF PREVENTIVE MEDICINES AND LIVES OF PIONEERS.

- (a) Some reference to origins.
- (b) Jenner and vaccination.
- (c) Pasteur and his work.
- (d) Lister and Modern Surgery.
- (e) The conquest of malaria.

## IV.—ELEMENTARY PSYCHOLOGY.

- (a) General definition and scope of Psychology, Data of Psychology. Psychological Methods—Introspection, Observation and Experiment.
- (b) *Mind and Body*.—Elementary knowledge of the structure and functions of the nervous system. The relation of mind and body.
- (c) *Analysis of Mental Phenomena*.—Cognition. Affection and activity. Their relation to one another.
- (d) (1) *Cognitive Processes*.—Sensation and Stimulus; kinds of sensation; intensity of sensations.
- (2) *Perception*.—Sensation and perception. Different kinds of perception. Illusions. Hallucinations.

(3) *Images and Ideas*.—Perception and Images. Types of Imagery. Reproductive and Productive Imagination. Association of ideas. The process of Reasoning.

(4) *Memory*.—Retention; recognition; recollection. Marks of a good memory. The training of memory.

(e) *Affective Processes*.—Pleasure and pain. Bodily expressions of affection. Emotion and Instinct.

(f) *Activity*.—Impulse. Automatic actions. Reflex actions. Instinctive actions. Ideo-motor action. Voluntary action. Habit. Conduct. Will and Character.

### INTERMEDIATE EXAMINATION IN COMMERCE.

The following are the subjects of examination :—

*Compulsory subjects—*

1. English.
2. Book-keeping and Accountancy.
3. Business Methods and Correspondence.
  - (a) Elementary Economics.
  - (b) Commercial Geography.

*Optional subjects—*

One of the following :—

1. Steno-typing (shorthand and typewriting).
2. Elements of Banking.
3. Elements of Industrial Organization.
4. Mathematics.

The following papers will be set :—

1. *English*.—Two papers of three hours each.
2. *Book-keeping and Accountancy*.—Two papers of three hours each.
3. *Business Methods and Correspondence*.—Two papers of three hours each : one paper on Business Methods and one paper on Correspondence, précis-writing, etc.
4. *Elementary Economics and Commercial Geography*.—Two papers of three hours each : one paper on Elementary Economics and one paper on Commercial Geography.
5. *Steno-typing* .. { *Shorthand*.—One paper of three hours.  
                                  { *Typewriting*.—One paper of one hour.
6. *Elements of Banking*.—One paper of three hours.
7. *Elements of Industrial Organization*.—One paper of three hours.
8. *Mathematics*.—Two papers of three hours each

No.	Subject.	Paper.	Time (hours)	Marks for each paper.	Total marks for each subject.	Minimum pass marks.
COMPULSORY.						
1	English .. {	First paper (Prose)	3	50	} 100	33
		Second paper (Composition and translation).	3	50		
2	Book-keeping and Accountancy. {	First paper ..	3	50	} 100	33
		Second paper ..	3	50		
3	Elementary Econo- mics and Com- mercial Geo- graphy. {	First paper (Eco- nomics).	3	50	} 100	33
		Second paper (Geography).	3	50		
4	Business Methods and Correspond- ence. {	First paper (Busi- ness methods).	3	50	} 100	
		Second paper (Corre- spondence, précis- writing, etc.).	3	50		
OPTIONAL.						
1	Steno-typing .. {	First paper (Short- hand).	*3	50	} 100	33
		Second paper (Type- writing).	1	50		
2	Elements of Bank- ing.	One paper ..	3	100	100	33
3	Elements of Indus- trial Organization.	One paper ..	3	100	100	33
4	Mathematics .. {	First paper ..	3	50	} 100	33
		Second paper ..	3	50		

\* Excluding five minutes' interval between the dictation of the two sections in Shorthand.

The syllabus in each subject is as follows :—

#### English.

(The same course as is prescribed for the Intermediate Examination of 1934, excluding Poetry portion.)

#### Book-keeping and Accountancy.

The principles of Double Entry Book-keeping and their application. Books of original entry, including Tabular Forms. The Ledger. Trial Balance. Manufacturing, Trading and Profit and Loss Accounts, with apportionments and adjustments.

Balance-sheets. Loose Leaf and Card Index system of Book keeping, Self-balancing Ledgers, Single Entry Book-keeping.

In the treatment of the above the following matters will be included :—Cheques, Bills of Exchange and Promissory notes ; Goodwill ; Classification of Assets ; Bad Debts ; Depreciation, Reserves and Sinking Funds ; Consignment, Joint Venture and Contract Accounts, Partnership and Company Accounts (including the Double Account-system) ; Capital and Revenue ; Investment Accounts ; Accounts Current and Average Due dates.

*Books recommended :—*

1. Students' Elementary Book-keeping, by Arthur Fieldhouse (Simpkin Marshall & Co., Limited, London, E. C., 4).
2. Advanced Accounts (fifth edition), by J. R. Batliboi (S. Govind & Co., Bombay).
3. Advanced Accounts, by R. N. Carter (Pitman & Sons).

**Business Methods.**

1. The general routine of a Business House :—Inward and Outward correspondence (excluding drafting) ; Methods of rapid communication ; Duplicating processes.

2. The significance of Trade, Commerce and Industry. Manufacturing and Distribution Houses. The buying and selling of goods. Mercantile Enquiry Agencies. Importation and Exportation of goods. Documentary Bills. Elementary Fire and Marine Insurance as applicable to this section. Use of Card Indexes.

3. The meaning of the principal commercial terms occurring in connexion with the above and the preparation of the chief documents involved, including arithmetical calculations.

4. An elementary knowledge of the Law relating to Contracts and Negotiable Instruments.

*Contract Law.*—Agreements that are contracts ; essentials of a good contract ; offer and acceptance ; genuineness of consent ; contractual capacity of parties ; legality of object (agreements, unlawful, immoral and against public policy void) ; performance and discharge of contracts ; breach of contract ; damages.

*Sale of Goods.*—Sale of ascertained and unascertained goods, passing, of ownership, delivery, actual and constructive, implied warranties, rights of unpaid seller.

*Negotiable Instruments.*—Making, drawing, accepting and endorsing of Promissory notes, Bills of Exchange and Cheques. Holder in due course, dishonour, noting and protest, presentment for payment and acceptance, acceptance for honour.

*Books recommended :—*

1. Modern Business Training, by John K. Grebby (MacDonald & Evans, London).
2. Commercial Practice, by Roop Ram Gupta and K. L. Govil, Parts I and II (Messrs. Gautama Bros. & Co., Cawnpore).

#### Correspondence.

This will consist of—

- (a) Commercial and official correspondence.
- (b) Rewriting in plain language of passages from market reports (financial and commodity markets) with explanations of selected terms and phrases occurring in the passages.
- (c) Précis-writing.

*Books recommended (not prescribed)—*

Modern Commercial Correspondence, by John K. Grebby (MacDonald & Evans, London).

Précis-writing, by K. L. Govil (Gautama Brothers & Co., Cawnpore).

#### Elementary Economics.

(The treatment of the subject should be very elementary and, as far as possible, it should be illustrated by reference to Indian conditions.)

The subject-matter and scope of Economics, fundamental notions and simple definitions. Relation between wants, efforts and satisfaction.

Production.—Factors of production. Land, Labour, Capital and Organization.

Nature and Limitations of land ; Division of labour and other factors of efficiency of labour ; Organization of capital.

Laws of increasing, diminishing and constant returns.

Wants.—Diminishing utility. Value—its determination. Balancing of supply and demand.

The Machinery of exchange. Money and banking; both to be illustrated from Indian examples (including the *sahukari* system in

the villages and the *sirafi* system in cities). Convertibility of paper money in India. Cheques and Hundis (Foreign exchanges are excluded).

Distribution.—Rent—interest—wages—profits (with particular reference to Indian conditions).

*Books recommended (but not prescribed as Text-books)—*

1. Outlines of Economics, by J. T. Goodchild (University Book D'pt, Agra).
2. PENSION : Economics of Everyday Life, Part I.
3. MORELAND : Introduction to Economics (Macmillan & Co.).
4. JEVONS : Money and Banking in India.
5. Introduction to Economics for Indian Students, by W. H. Moreland (Macmillan & Co., St. Martin's Street, London).
6. The Economics of Everyday Life, by Sir T. H. Penson (Cambridge University Press).

Commercial Geography.—(a) An elementary study of the principles of economic Geography on the basis of regional divisions, and their correlation with the distribution of the principal commercial commodities and industries.

(b) Trade centres, Ports, Trade Routes.

(c) Detailed study of India on the regional basis on the lines indicated above.

*Books recommended—*

- (1) Rudmose Brown's "Principles of Economic Geography."
- (2) Howarth's "A Short Commercial Geography."

#### TYPEWRITING.

The syllabus will be the same as in Commerce for the High School Examination of 1934, but of a more advanced character—the speed to be 30 words per minute.

There shall be no paper on the theory of typewriting.

The maximum marks and the time allotted to the papers in this subject are as follows :—

		Marks.	Time allowed.
Type-copying ...	{ (a) Passage and letter..	35	One hour.
	{ (b) Tabular statement..	15	
Total	..	50	

*Books recommended :—*

1. Pitman's or Remington's Typewriting Manual.
2. A Typewriting Manual for Indian Students, by E. M. Moffatt and V. A. Kshirsagar (Methodist Publishing House, Lucknow).
3. The New Manual of Typewriting, by Y. D. Keshkar and Jagdish Saran (Methodist Publishing House, Lucknow).
4. Modern Theory and Practice of typewriting, Parts I and II, by S. R. Gupta and K. L. Agarwala (Gupta Bros. & Co., Khurja).

**SHORTHAND.**

1. Writing in shorthand from a passage dictated at the rate of 80 words a minute, for a period of ten minutes.
2. Writing in shorthand from a business letter of general commercial phraseology dictated at the rate of 80 words a minute, for a period of five minutes.
3. Transcription of both the above.

*Book recommended :—*

Pitman's Instructor, by Pitman & Sons, London.

**ELEMENTS OF BANKING.**

1. The nature of Banking.
2. The functions of a banker.
3. The meaning of Banking and other mercantile terms.
4. Simple banking operations.
5. The English money market.
6. Elements of foreign exchange.
7. The constituents of the Indian Money Market.
8. Indigenous Banking in India : "Shroffs" and Mahajans and their operations.
9. The Indian Joint-stock Banks.
10. The Imperial Bank of India.
11. The question of a Central Bank for India.
12. The financing of Indian trade.
13. How to read the money market reports.
14. Elements of Indian law relating to bills, cheques and promissory notes.
15. Defects and causes of the backwardness of Indian banking.
16. Development of Indian banking.

*Book recommended :—*

Elements of Banking, by Ramchandra Rao (Calcutta University Press).

### ELEMENTS OF INDUSTRIAL ORGANIZATION.

1. The Organization of an Indian Village.
2. Landownership and methods of cultivation.
3. Obstacles to agricultural progress and remedies.
4. Cottage industries—their relation to agriculture.
5. Elements of Factory Organization.
6. Co-operation in Production and Distribution.

*Books recommended :—*

1. Indian Industrial Organization—Morrison.
2. Industrial Revolution—Chatterton.

Reference should be made to—

India in 1926.

Indian Year Book.

### MATHEMATICS.

*Paper I (a).*—Commercial Arithmetic, Proportion, Percentages, Stocks and Shares, Present Worth and Discount, Exchange Rates, Partnership, Profit and Loss, Commission, Brokerage, Premium, Simple and compound interest (the use of logarithms will be permitted when necessary).

*(b) Algebra.*—The Theory, Quadratic Equations, Arithmetical, Geometrical and Harmonic Progression, Permutations and Combinations, Theory of Indices and Logarithms, Use of binomial and exponential theorems.

*(c) Trigonometry.*—Measurements of angles, trigonometrical ratios, identities and trigonometrical equations, practical applications of Logarithms; Solution of Triangles, properties of triangles.

*Paper II (a) (1).*—Pure Geometry as given in parts V and VI of Hall and Stevens' Geometry.

*(2) Analytical Geometry.*—Straight Lines, Circles, Elementary Properties of conics.

*(b) Elements of differential Calculus.*

*Book recommended :—*

Commercial Mathematics (Sir Isaac Pitman & Sons).

## INTERMEDIATE EXAMINATION IN AGRICULTURE.

[N.B.—Preference for admission to this course will be given to candidates who have studied (a) Chemistry and Physics, or (b) Agriculture for their admission test examination.]

The following are the subjects of examination :—

### Group 1.

		<i>Maximum marks.</i>	<i>Time allowed.</i>
PAPER I.—Chemistry	.. ..	25	Three hours.
PAPER II.—Physics	.. ..	25	Ditto.
Practical Chemistry	.. ..	25	Ditto.
Practical Physics	.. ..	25	Ditto.
Total	.. ..	<hr/> 100	

### Group 2.

PAPER I.—Botany	.. ..	25	Three hours.
PAPER II.—Zoology	.. ..	25	Ditto.
Practical Botany	.. ..	25	Ditto.
Practical Zoology	.. ..	25	Ditto.
Total	.. ..	<hr/> 100	

### Group 3.

PAPER I.—Physical properties of soil, soil geology, climatology	.. ..	30	Three hours.
PAPER II.—Tillage and Plant Feeding, Principles of Manuring, Principles of Irrigation and Drainage	.. ..	30	Ditto.
Practical Farming	.. ..	30	Ditto.
Practical A. Crop culture.			
Practical B. Farm Machinery, including ploughing and other tillage operations	.. ..	30	Ditto.
Practical C. Animal Husbandry	.. ..	30	Ditto.
Total	.. ..	<hr/> 150	

## Group 4.

## ENGLISH.

*Maximum Time allowed  
marks.*

PAPER I.—Prose text-books, books recommended for general study, unseens and Grammar	25	Three hours.
PAPER II.—Translation and Composition	25	Ditto.
Total ..	50	

## Group 5.

## ECONOMICS.

PAPER I.—(i) Introduction, (ii) Production, (iii) Exchange and (iv) Consumption ..	25	Three hours.
PAPER II.—(i) Difference in the cost of production and distribution, (ii) Organization and Management and (iii) Taxation ..	25	Ditto.
Total ..	50	

or

## MATHEMATICS.

PAPER I.—(i) Algebra, (ii) Geometry and Mensuration, and (iii) Trigonometry ..	25	Three hours.
PAPER II.—Graphs and Integration ..	25	Ditto.
Total ..	50	

(N.B.—Candidates are required to pass in the aggregate of papers and practicals in each separate group and not in each individual paper or practical in that group).

The syllabus in each subject is as follows :—

## GROUP I.

## I.—CHEMISTRY.

## A.—Inorganic.

Common properties of matter.

Physical and chemical changes; elements; mixtures and compounds. Atoms; molecules, symbols; formulæ; equations and simple chemical calculations.

The fundamental principles of Chemistry :—Law of chemical combination by weight and by volume. Atomic theory ; atomic, molecular and equivalent weights. Valency. Avogadro's hypothesis and relation of gas density to molecular weights. Charles' and Boyle's Laws. Elementary ideas as to the nature of dissociation and of the Ionic theory.

The outline of the periodic law.

The following elements and their compounds :—

Hydrogen and Oxygen—their preparation and properties. Oxidation and reduction. Oxides, acids, bases and salts.

Water :—Electrolysis ; synthesis ; solution ; crystallization ; efflorescence and deliquescence ; pure and natural waters ; temporary and permanent hardness ; methods of softening water.

Nitrogen ; ammonia ; oxides of nitrogen ; nitric acid and the nitrates ; nitrification.

The atmosphere, its chief constituents and properties.

The family of the halogens with special reference to chlorine, hydrochloric acid and the chlorides.

Carbon ; forms of carbon ; carbon dioxide and the carbonates.

Sulphur ; sulphur dioxide and trioxide ; sulphuric acid and the sulphates ; sulphuretted hydrogen and the sulphides.

Phosphorous ; phosphorous pentoxide ; phosphoric acid and the phosphates.

Arsenic and arsenious oxide.

Silicon, silica and the silicates.

Mercury and Silver—their oxides, chlorides and nitrates.

Copper—its sulphate, nitrate and oxides.

Lead—its oxides, chlorides and sulphate.

Iron—its oxides, sulphate, chloride and phosphate ; steel, cast iron and wrought iron.

Aluminium—its oxides, sulphate and chloride.

Zinc—its oxide, chloride and nitrate.

Manganese—its oxides, chloride, sulphate and potassium permanganate.

Calcium—its oxide, hydroxide, chloride, nitrate, sulphate, carbonate and phosphate.

Barium—its oxides, carbonate, chloride and sulphate.

Magnesium—its oxide, chloride, sulphate, carbonate and phosphate.

Sodium, Potassium and Ammonium—their hydrates, chlorides, nitrates, sulphates, carbonates and phosphates.

#### B.—Organic.

General composition ; physical properties and general classification of carbon compounds.

Hydrocarbons, saturated and unsaturated—methane, ethane, ethylene and acetylene.

Alcohols ; methyl and ethyl alcohols ; glycerine.

Aldehydes and ketones ; formaldehyde, acetaldehyde, acetone.

Ethers :—Ethyl ethers.

Acids ; formic, acetic, butyric, oxalic, lactic and citric.

Fats, oils and soaps.

Carbohydrates : grape sugar, fruit sugar, cane sugar, starch and cellulose.

Proteins : Albumin.

#### Practical Work in Chemistry.

Differentiation between chemical compounds and mechanical mixtures.

Solution ; suspension ; sedimentation ; decantation ; filtration ; precipitation ; crystallisation and distillation.

Examination of the important atmospheric constituents.

Preparation of hydrogen, oxygen, nitrogen, nitrous oxide, nitric oxide, nitric acid, ammonia, chlorine, hydrochloric acid, sulphur dioxide and carbon dioxide.

Examination of hard water and methods of softening.

Preparation of the following in their pure form :—

Sodium chloride, potassium or ammonium sulphate, calcium carbonate and ferric oxide.

Acidimetry and alkalimetry.

Qualitative reactions of the following :—

Chlorides, nitrates, sulphates and sulphides, carbonates, phosphates : arsenic, silver, mercury, copper, lead, iron, aluminium, zinc, manganese, calcium, barium, magnesium, sodium, potassium and ammonium.

Qualitative analysis of single salts containing one acid and one base.

Preparation of methane.

Examination of the following organic compounds :—

Ethyl alcohol, glycerine, oxalic acid, grape sugar, fruit sugar, cane sugar and starch.

Study of the physical and chemical properties of vegetable and mineral oils. Saponification.

Qualitative reactions of proteins.

*The following books are suggested for reference :—*

1. Everyday Chemistry, by Alfred Vivian (American Book Co., New York). Price about Rs. 5.

2. A Foundation Course in Chemistry for Students of Agriculture and Technology, by J. W. Dodgson and J. A. Murray (Longmans, Green & Co., Calcutta). Price about Rs. 3.

3. Introduction to the Study of Inorganic Chemistry, by W. A. Miller (Longmans, Green & Co., Calcutta). Price about Rs. 4.

4. Organic Chemistry, by Perkin and Kipping (W. R. Chambers, Ltd., London). Price about Rs. 7.

5. Elementary Agricultural Chemistry, by H. Ingle (Charles Griffin & Co., Ltd., London). Price about Rs. 4.

6. Inorganic Chemistry, by F. J. Holmyard (Edward Arnold & Co., Ltd., London).

## II.—PHYSICS.

Units and measurements ; Metric system ; Length ; Area ; Volume ; Mass ; Time. The vernier and the micrometer scales. Balance and density.

Velocity, acceleration and momentum. Kinematical equations of rectilinear motion. Composition and resolution of velocities or accelerations ; the parallelogram law.

Force and motion ; inertia. Newton's laws of motion. Measure of a force. Composition and resolution of forces. Gravity and laws of falling bodies ; mass and weight ; centre of gravity. Centripetal and centrifugal forces defined. Projectiles, torques or moments.

Equilibrium of forces ; triangle and polygon of forces ; Simple illustrations of friction and its laws. Stable and unstable equilibrium and conditions of equilibrium as in levers, pulleys, inclined plane, ploughs.

Pressure of liquids at rest, variation with depth. Transmission of liquid pressure ; Hydraulic press ; Principle of Archimedes ; Laws of hydrometers. Specific gravity.

The atmospheric pressure. Boyle's Law. Force and suction pumps. Syphon.

Work ; energy ; power ; efficiency of machines : definitions and simple illustrations.

Matter and energy. Properties of matter. Surface tension ; capillarity ; viscosity ; osmosis ; rigidity and elasticity. Molecular structure of matter. Different forms of energy.

Liquids and gases in motion, wave motion (elementary treatment).

Heat energy :—Source ; modes of transference ; effects of heat on matter ; thermometry ; specific heats ; evaporation and boiling ; vapour pressure ; condensation and frost ; latent heats ; hygrometry and dew point ; mechanical equivalent of heat.

Radiant energy :—Source of light ; mode of propagation ; light waves ; shadows ; illumination ; reflection ; transmission ; absorption and dispersion of light ; magnification ; images ; telescope ; microscope.

Magnetic energy :—Magnets ; magnetic forces ; magnetisation : compass.

Electric energy :—Electrification by friction ; insulators ; conductors ; electroscope ; electrophorus. Electricity generated by chemical action ; by dynamos. Resistance ; magnetic effect of current ; transformation of electric energy into heat, light and power ; practical acquaintance with galvanometers, voltmeters, ammeters, electrolysis. (Simplest forms.)

#### Practical Work in Physics.

Accurate determination of length, area, mass, volume and density. Use of calipers, screw gauge, spherometer, balance, burette and squared paper.

Determination of acceleration due to gravity by the simple pendulum.

Verification of the law of parallelogram of forces.

Verification of the principles of parallel forces and of the lever.

Determination of centre of gravity of plane laminas.

Determination of co-efficient of friction.

Determination of efficiency of a system of pulleys.

Use of the Nicholson's hydrometer.

Use of the hydrostatic balance : determination of specific gravities of—

(1) Insoluble sinking solid, (2) floating solid, (3) liquid.

Verification of Boyle's Law and practice in barometer reading.

Use of the density bottle : determination of true and apparent density of soils and pore space.

Practice in reading various thermometers.

Determination of humidity and dew point.

Determination of boiling point.

Preparation of a graph showing cooling of water by radiation.

Determination of specific heat :—(1) Method of mixture, (2) method of radiation.

Determination of latent heats of vaporisation and fusion.

Reflection of light : use of plane and concave mirrors.

Refraction of light : determination of refractive index.

Determination of focal length of a converging lens.

Practice in use of a telescope and of a microscope.

Magnetisation of needles and determination of their poles.

Charting of lines of force due to a magnet in different positions.

Use of simple electroscopes (Gold leaf and Pith ball).

Construction of a simple cell and use of the simple galvanometer.

Determination of Electromotive force by the potentiometer or balance method.

Determination of Electric resistance by substitution method.

*The following books are suggested for reference :—*

1. A High School Course in Physics, by F. R. Gorton (D. Appleton & Co., New York). Price about Rs. 5.

2. Everyday Physics, by H. E. Hadley (Macmillan & Co., Ltd., London).

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## GROUP II.

### BIOLOGY.

( The course will aim at the study of the phenomena exhibited by living matter as illustrated by lower plants, animals and their organs.)

*Introduction.*—Living and non-living matter ; study of life in its simplest form as illustrated by Amoeba, Nostoc, Euglena, Volvox,

Paramoecium and Spirogyra ; general properties of protoplasm as the basis of all life.

The cell, animal and vegetable, its growth and simple division ; combination of cells to form tissues ; combination of tissues to form organs as illustrated by Hydra and Moss.

### I. Botany.

Study of plants in general.

External morphology of the plant organs : stem, root, leaf, flower, fruit and seed.

Internal morphology—

(a) Plant cell.

(b) Stem, root and leaf.

Reproduction—

Vegetative reproduction.

Sexual reproduction—

(a) The flower : structure and functions.

(b) Pollination.

(c) The seed : development, structure, dissemination.

(d) The fruit : development, types, functions.

(e) Germination.

Physiology : elementary study of the following :—

(a) Chemical composition of plants.

(b) Water in plants ; intake of water and inorganic salts.

(c) Carbon-assimilation.

(d) Transportation ; food storage.

(e) Transpiration.

(f) Respiration.

(g) Growth.

Rapid survey of the plant kingdom :—Bacteria, spirogyra, mucor, moss, fern, cycas.

Study of botanical characters of (Field and garden crop plants should be used as far as possible)—Cruciferae, Malvaceae, Leguminosae, Rosaceae, Cucurbitaceae, Compositaceae, Solanaceae, Euphorbiaceae, Liliaceae, Gramineae.

*Books recommended:—*

1. Lowson and Sahni . . Text-book of Botany (Indian edition).  
(London University Tutorial Press.  
or Thacker, Spink and Company  
Calcutta).

2. Percival .. Agricultural Botany (Duckworth).
3. Ranga Chari .. Elementary Botany for Indian Schools.  
(Government Press, Madras).
4. Gager .. Fundamentals of Botany (Blakiston).
5. Transeau .. General Botany (World Book Company).
6. Farmer and Chowdhry .. Practical Introduction to the Study  
of Botany (Longmans, Green and  
Company, Limited).

## II. Zoology.

Acquaintance with the following types as illustrations of the various kinds of life :—

Tapeworm, Earthworm, Leech, Snail and Slug, Termite, Fish, Frog.

General organization of earthworm, Fresh-water mussel, lobster and cockroach.

Elementary anatomy and physiology of the important systems of the following :—

Amphioxus, fish, frog, fowl and squirrel or other small mammal.

*Books recommended:—*

1. Theobald .. Agricultural Zoology (W. Blackwood).
2. Gilbert Bourne .. Comparative Anatomy of Animals (G.  
Bell & Sons).
3. Marshall.. .. Physiology of Farm Animals (Macmil-  
lan, Calcutta).
4. Marshall and Hurst .. Practical Zoology (Smith Elder and  
Company).

### Practical Work in Botany.

A general study of the plant as a whole.

Growing of plants from seeds, different types of germination of seeds.

Examination of seedlings to study external morphology of primary organs.

Simple and compound microscopes—Study of their parts and their uses.

Examination and description of various types of roots, stems and leaves, their constituent parts and their modification.

Examination under microscope of cotton fibres, hairs, starch and air bubbles.

Study of unicellular organisms such as Yeast, Nostoc, Spirogyra, leaves of Vallisnaria and staminal hairs of Tradescantia to demonstrate protoplasmic movements.

Freehand section with staining practice of root, stem and leaf and their description.

Study of cell-wall, protoplasm, vacuoles, nucleus, plastids and starch grains.

Iodine test of starch grains.

Examination, dissection and descriptive study of flowers and their parts and the study of their functions.

Examination and identification of fruits and seeds.

Identification of Nostoc, Euglena, Spirogyra, Mucor, Moss and parts of fern and cycas.

Study of external botanical characters, including identification of plants of common field and garden crops belonging to families in the syllabus.

#### Practical Work in Zoology.

1. Microscopic study—
  - I. The examination and study of the microscope and its parts.
  - II. The study of the living cell—
    - (a) Examination of pond water.
    - (b) Amoeba.
    - (c) Eggs of mosquito and fly.
    - (d) Blood corpuscles.
    - (e) Scrapings from inside of mouth.
2. The study of microscopic slides—
  - (a) Mouth parts of the various insects.
  - (b) Important minute structures of the types of study.
3. Preparations for microscopic examination—
  - (a) Striated muscle in salt solution.
  - (b) Ciliated cells in salt solution.
  - (c) Setae of earthworm in glycerine or water.
  - (d) Mouth parts and gizzard of cockroach in glycerine or water.
4. Study of the external characters and habits of the living animals included in the course, excepting endoparasites.

5. Demonstration dissections in batches—  
Heart and eye of sheep or goat.
6. Osteology—
  - (a) Study of dentition in dog, horse or ox.
  - (b) Study of limbs of horse and ox.
7. Dissection by individual students—
  - (a) Grasshopper for all important systems.
  - (b) Pond snail for body organization only.
  - (c) Squirrel for all the important systems. Other mammals—their organs may be substituted.
8. Collection and preservation of the types of study. Their preparation for the museum—
  - (a) Stages of the animals used as types for life history.
  - (b) Insects—Grasshoppers, butterflies or moths.
9. Rearing a butterfly or moth, preferably silk moth.
10. Field observations—
  - (a) Animals in their natural habitat.
  - (b) Breeding places of harmful insects and their pests.  
Housefly, mosquito and termite.
  - (c) The insect pest selected for the year.
  - (d) Bird selected for study and its habits.
11. Students will make daily records of the "Field observations" and laboratory work in special note-books prescribed by the teacher in charge. The books will be submitted in the final examination as part of the practical work, duly certified as the *bona fide* work of the candidate.

*Books suggested—*

1. Theobald : Agricultural Zoology (William Blackwood and Sons, Edinburgh, London).
2. Kellog and Doane : Economic Zoology and Entomology.
3. Pusa Bulletins .. .. Nos. 113, 6 and 143.

GROUP III.

I.—ELEMENTARY SOIL SCIENCE.

*Soil Geology.*—The origin of soils ; classification and nature of soil-forming rocks ; recognition of the following rocks and their chief characteristics :—

- (1) Igneous: granite, syenite, diorite, biabase, gabbro, basalt.

(2) Sedimentary limestone, sandstone, shale, dolomite.

(3) Metamorphic schists ; gneiss ; marble ; slate ; quartzite.

The mineral constituents of the more important soil-forming rocks, their nature and composition.

The importance of felspars in the formation of clay.

The nature of kaolinite.

Acid and basic rocks and their effect upon soils formed from them.

*The physical properties of soils.*—Pore space ; number of soil particles per given volume and their relation to surface area exposed to moisture and air, resistance to cultivation operations, plasticity, absorption, cohesion ; limits of moisture for successful tillage ; effect of presence of organic matter on soil structure ; effect of lime ; effect of cultivation ; sources of soil heat ; specific heat of the soil ; specific gravity, apparent and absolute, of the soil ; effect of colour on absorption of heat and of humus on conductivity of heat ; effect of decay of organic matter on soil temperature ; control of soil temperature.

*Soil classes.*—Classification of soils into sand, loam, clay, calcareous, humic and peaty soils and the nature of each class ; division of the United Provinces into its natural soil classes and the characteristics of each class.

*Tillage and plant food in the soil.*—Objects, kinds and timeliness of tillage. Chemical and physical effects of tillage. Elements necessary for plant growth and their sources ; abundant and deficient elements in the soil ; conversion of organic matter into plant food, conditions necessary for bacterial activity in the soil ; the Nitrogen cycle briefly explained ; the relation of air, water and heat to plant food in the soil, the presence of lime and its importance to the production of plant food.

*General principles of manuring in relation to soils.*—The effect of organic manures on the texture of soils, the correct time of application of manures in relation to irrigation and rain water ; losses of plant food by incorrect manuring ; losses by incorrect storage and their prevention ; acidity and defloccation due to excessive and unsuitable manuring ; remedies for this condition ; condition of soil necessary before application of fertilisers can be profitable ; the essential difference between organic manures and inorganic manures as regards effect on soils ; methods of manuring with both organic manures and chemical fertilisers.

*The following books are suggested for reference :—*

1. The Soil, by A. D. Hall (John Murray, London).
2. The Physical Properties of Soils, by A. G. McCall (Orange Judd and Company, New York). Price about Rs. 2-12.
3. First Principles of Soil Fertility, by Alfred Vivian (Orange Judd and Company, New York, or Christian Book and Tract Society, Allahabad). Price Rs. 2-7.
4. Soils, their Properties and Management, by Lyon, Fippin and Buckman (Macmillan and Company, New York). Price Rs. 10.
5. Soils and Fertilizers, by Harry Snyder (Macmillan and Company, New York).

*Climatology.*—The distribution of rainfall, its effect upon the composition of soils ; determination of humidity ; factors affecting dew ; changes in atmospheric temperature and their effect upon humidity ; winds and their importance in farming ; snow, ice and frost and their relation to the soil ; methods of obtaining data for climatic reports, simple instruments used in meteorological observations ; climate in relation to soils and plant growth.

*The following books are suggested for reference :—*

1. Agricultural Meteorology, by Warren Smith (Macmillan and Company, New York).
2. Forecasting Weather, by W. A. Shaw (Constable and Company, London).

*General Principles of Irrigation and Drainage.*—(a) *Irrigation.*—The necessity of irrigation, water requirements of crops and the danger of excessive water ; methods of reducing water requirements of crops ; evaporation and its relation to plant growth ; prevention of losses of irrigation water ; amount of seepage in the three main classes of soils, sands, loams and clays ; the construction of irrigation channels ; measurement of discharge of water from outlets ; measurement of water in flowing channels ; relation of depth in inches to total quantity of water per irrigation ; systems and methods of irrigating crops ; lift and flow irrigation ; appliances commonly used for lifting water ; simple calculations of discharge from common irrigation appliances.

(b) *Drainage.*—The necessity of removing surplus water from the soil ; the dangers resulting from excessive moisture in the soil ; alkali soils ; their formation and prevention by drainage ; acid soils and their

amelioration by drainage ; the combined effect of irrigation and drainage on acid soils, alkali soils and neutral soils ; kinds of drains ; cost of drains and upkeep ; correct position of drains in a field ; size and depth of drains ; control of erosion.

*The following books are suggested for reference :—*

1. Agriculture and Irrigation in Continental and Tropical Climates, by K. D. Doyle (Thacker, Spink and Company). Price Rs. 16-8.

2. Irrigation and Drainage, by King (Mount Pleasant Press, Harrisburg, Pa).

NOTE.—It is suggested that the lecture work in soil science be co-ordinated as far as possible with related work in the field.

## II.—PRACTICAL FARMING.

I. *Crop Culture*.—(A) The growing of farm and vegetable crops and their care by students ; practice in the following operations :—

- (a) Preparation of seed bed and soils.
- (b) Sowing of seed.
- (c) Transplanting.
- (d) Irrigation with and without water-lifting appliances.
- (e) Interculture.
- (f) Weeding.
- (g) Earthing.
- (h) Harvesting, including reaping with machinery.

(B) *Crops*.—Special attention to be given to the following :—

- |                   |    |   |
|-------------------|----|---|
| (1) Cereals ..    | .. | Wheat, barley, rice, bajra, juar and maize. |
| (2) Fibres ...    | .. | Cotton, sunn-hemp, patsunn.                 |
| (3) Oil-seeds..   | .. | Castor, linseed, mustard.                   |
| (4) Legumes..     | .. | Peas, groundnuts, arhar, gram.              |
| (5) Fodders ..    | .. | Juar, lucerne, guar, oats.                  |
| (6) Miscellaneous | .. | Sugarcane, potatoes, tobacco.               |

(C) Familiarity with the principles of rotations of crops.

(D) *Vegetable Crops* :—

- |                 |    |   |
|-----------------|----|---|
| (a) Cole-crops  | .. | Cabbage, knol-kohl, cauliflower.        |
| (b) Root crops  | .. | Carrot, beetroot, turnip, sweet potato. |
| (c) Bulb crops  | .. | Onion, garlic.                          |
| (d) Tuber crops | .. | Potato.                                 |

- |                          |     |   |
|--------------------------|-----|---|
| (e) Legumes              | ..  | Peas and beans.   |
| (f) Cucurbitaceous crops |     | Cucumber, torai, melons, pumpkins, gourds.                          |
| (g) Miscellaneous        | ... | Tomato, brinjals, bhindi, corms, chillies, turmeric, ginger, maize. |

*The following books are suggested for reference :—*

1. Agricultural Note-book of Facts and Figures for the United Provinces, to be published shortly by the Department of Agriculture, United Provinces.
2. The Complete Farmer, by Premirose McCommell (Cassel and Company, London).
3. Roberts and Fawlkner : A Text-book of Punjab Agriculture.
4. Crop Production, by A. and G. Howard, Institute of Plant Industry, Indore, C. I.
5. Chemistry of Crop Production, by T. B. Wood (University Tutorial Press).

*II. Introduction to Animal Husbandry.*—The course to deal with the draft bullock, the dairy cow and the goat. The naming of the different external parts ; relation of form and function ; ability to judge ages ; score card methods of judging ; measurement of speed of work of the draft bullock ; the handling of bullocks, cows and goats ; cleaning of animals and byres ; milking ; practice in preparation of balanced rations for dairy cow, bullock, young stock and goat ; practice in watering and exercising ; familiarity with the appearance and use of common medicines and antiseptics ; ability to throw an animal with ropes ; market value of dairy, draft cattle and goats ; keeping of records of dairy cattle.

*The following books are suggested for reference :—*

1. "Feeding of Crops and Stock," by A. D. Hall.
2. "The Complete Farmer," by Premirose McCommell.
3. "Judging Live-stock," by John A. Craig (Kenyon Printing Company, Des Moines, Iowa). Price Rs. 7.
4. Feeds and Feeding (abridged edition), by Henry and Morrison (Henry and Morrison, Madison, Wiscon.). Price Rs. 10.

*III. Farm Machinery.*—Workshop practice in wood and iron. Practical study of the plough, harrow, cultivator, roller and planker—ability to plough with desi mould board and disc ploughs ; fami-

familiarity with the methods of hitching ; adjustment of implements and methods of ploughing ; familiarity with the use of common seed-drills ; weeding and cultivation with power and hand implements ; grinding, cane crushing and fodder cutting.

*The following books are suggested for reference :—*

1. Farm Mechanics, by Crawshaw and Lehman (Manual Arts Press, Peoria, Illinois, U. S. A.).
2. Farm Machinery and Farm Motors, by Davidson (Thacker Spink and Company). Price, Rs. 11-8.

*IV. Calculations.*—The following simple calculations to be noted in the student's note-book. Field notes attested by the teacher to be produced at the examinations :—

- (1) Time taken to plough, harrow, cultivate and plank one acre under the following conditions :—  
Hard soil,  
Soft soil,  
Sod and  
Stubble.
- (2) The variation in time taken in area ploughed with differences in depth and width of ploughing under similar conditions.
- (3) The area sown with simple seed drills per day calculated from the work done in two hours ; probabilities of error.
- (4) Quantity of work done in hand-weeding, harrowing, etc., per hour by a given number of labourers ; in this case students.
- (5) Calculations of discharge of water from outlets, from irrigation channels and from irrigation appliances.
- (6) Estimation of loss by evaporation and seepage.
- (7) Estimation of area of land irrigated in a given time by irrigation appliances in common use ; duty of water.
- (8) Increase in outturn of crops by top dressing with chemical fertilisers and oil cakes.
- (9) Calculation of quantity of fodder chopped by machine worked  
(a) by hand, (b) by electricity or other power, and comparison with hand-chopping with gandasa.
- (10) Calculation of speed of fodder cutter and other machines in common use on the farm in revolutions per minute.

GROUP IV.

ENGLISH.

There will be two papers of three hours each. The first paper will be on (a) Prose text-books, (b) books recommended for general study, (c) Unseens and (d) Grammar. The second paper will include Translation and Composition.

*Text-books prescribed :—*

(a) For detailed study—

- (1) Easier English Unseens, by A. C. Mukerji.
- (2) Translation, Essay-writing and Unseens for Intermediate Classes, by Raghukul Tilak and Deoki Nandan Sharma.
- (3) Types of the English Essay, by R. B. A. C. Mukerji.

(b) General Study—

- (1) The Strange Case of Dr. Jekyll and Mr. Hyde, by Robert Louis Stevenson.

Two books of general scientific interest, as for instance: —

- (2) Biology, the Science of Life, by Professor Henderson, M.A.
- (3) The Structure of the Earth, by Rev. Bonney, F.R.S.

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GROUP V.

ECONOMICS.

*Introduction.*—What is Economics? Why is one nation richer than another? Why is one man richer than another? What is wealth? How does it differ from income? The whole course is an answer to these questions.

*Production.*—What does it cost to produce wheat on a village farm in the United Provinces? Cost of labour, ploughing, sowing, weeding, reaping, threshing, etc. Purchase and depreciation. Interest on all expenses till the crop is sold. Rent of the land and transportation to the bazaar. Cost of supervision.

Examine similarly the cost of producing and marketing milk and other common necessities.

*Exchange.*—Has it paid to produce wheat and milk at the above cost? What are the present prices of wheat, milk, etc., in the United Provinces for different qualities, at different seasons and for the last five years? What causes these differences and changes? Laws of supply and demand and causes for variation. Relation of prices to cost of production over a period of years.

*Consumption.*—Why do we demand wheat, cotton, milk, pottery, tools? Wants and their varying importance. Necessities, comforts, luxuries. Division of income between various wants. Budgets of students and villagers. Do we get equal satisfaction from equal expenditure? How do we change our purchase when prices fall and when our incomes increase?

*Difference in the cost of production and distribution.*—Why do rents differ? Kinds of lands. Advantages of fertility and situation.

Why do rates of interest differ? Short and long loans: risks and management of loans. Co-operative credit. Relation of the rate of interest to the supply of capital. Causes of saving.

Why do wages differ? Grades of labour. Efficiency of labour. Real and nominal wages. Cost of living and the standard of living. Relation of wages to the supply of labour. Relation of birth-rates and death-rates to income.

*Organization and management.*—In what different ways might wheat be produced? Does the method depend upon situation? Wages? The rate of interest? Education? Quality of the product? How is the method actually determined? By whom?

Carry out this reasoning for milk and other common necessities.

In what cases is it most profitable to use a railway, a bicycle and one's feet? Compare the uses of handwriting, typewriting and printing press. Hand-sewing and the sewing machine. Why do primitive methods continue in use along with more advanced ones?

Money, banking and foreign exchange, barter, uses of money, reasons for minting and for free coinage, paper money and cheques. The work of banks and their economic importance. India's foreign trade and its advantages.

*Taxation.*—The necessity for taxation. The income-tax, custom duties, land revenue and excise. Who bears these taxes? Reasons for progressive taxation. Imperial and local taxation.

*The following books are suggested for reference :—*

1. Elements of Economics, Vol. I, by Alfred Marshall (Macmillan & Co., London).
2. An Introduction to Economics for Indian Students, by Moreland.

or

## MATHEMATICS.

**ALGEBRA :—**Quadratic equations involving one or two unknown quantities.

Arithmetical and Geometrical Progressions.

Permutations and Combinations.

The Binomial Theorem for positive integral index.

Proportions and Variations.

Use of indices and logarithms.

Practical use of the Slide Rule.

**GEOMETRY AND MENSURATION :—**Simple Plane and Solid Figures excluding any detail about the sections of a cone.

Similar figures and proportionals.

Field book.

Collinear points and concurrent straight lines.

**TRIGONOMETRY :—**Trigonometrical Ratios.

Easy trigonometrical identities and equations.

Solution of triangles.

Practical measurement of angles of elevation, heights and distances, including the necessary calculations.

GRAPHS :—Variables and co-ordinates.

Statistical graphs and those governed by a natural law.  
Continuity and discontinuity of graphs. Problems.

Graphs and Algebraical expression of functions.

The linear graph.

Use of Cartesian co-ordinates :—Distance between two points. Distance between a straight line and a point

Angle between two straight lines.

The quadratic graphs.

Practical Graphical Interpolation.

INTEGRATION :—Small errors ; Infinitesimal quantities.

Differentials ; Differential coefficient.

Easy standard forms of differentiation explained (without elaborate proofs). Sum and product of functions.

Summation of series.

Integration considered as summation of a series of differentials.

A few very easy standard forms of integrals (without elaborate proofs). Integration by parts.

Easy determinations of length, area and volume.

Practical use of the planimeter and the opisometer.

۲ — اصول حدیث و حدیث —

- ( ۱ ) سنی - ( ۱ ) مقدمہ ابن صلاح و مسلم نصف اول \*  
( ب ) شیعہ - استبصار جلد اول \*

۳ — حدیث —

- ( ۱ ) سنی - بخاری جلد اول \*  
( ب ) شیعہ - کافی باب التوحید کتاب العقل والجہل و وجیزہ \*  
۴ — فقہ —

- ( ۱ ) سنی - شرح معانی الآثار جلد اول \*  
( ب ) شیعہ - شرح لمعہ از اول تا خمس و تجارت \*

۵ — اصول فقہ —

- ( ۱ ) سنی - مسلم الثبوت تا مقام درس و تلویح مقدمات اربعہ \*  
( ب ) شیعہ - قوانین الاصول ادلہ عقلیہ \*  
۶ — ( ۱ ) سنی - تاریخ الملل والعقائد —

الملل والنحل للمشرستانی نصف اول نسیم الکلام از مولوی  
محمد شریف ( انوار احمدی پریس الہ آباد ) و دین  
و دانش مولوی محمد علی صاحب پروفیسر کپور تھلہ  
کالج ( مطبوعہ روز بازار پریس امرتسر ) ہر اے مطالعہ \*

( ب ) شیعہ - عقائد —

الملل والنحل للمشرستانی نصف اول و شرح تجرید  
کامل از علامہ حلبی \*

طب

۱ — نفیسی \*

۲ — تشریح - مقالہ ثانیہ و ثالثہ کامل الصناعۃ \*

۳ — مفردات - قرابادین - مفردات عزیز - حل معضلات سیدیسی \*

۴ — معالجات شرح اسباب جلد اول و جلد ثانی تا حمیات حیات قانون \*

۵ — عمل بالید - مقالہ تا سع کامل الصناعۃ \*

۶ — علم القابلہ - تفہیم القابلہ ( انوار احمدی پریس الہ آباد ) \*

## کتاب درسیات

## عربی علم ادب

(۱) نثر

\* مقامات حمیدی + ۱ مقالہ اول - مقدمہ رنات الطرب - کتاب المتکاسین  
والاضدان للبحاظ کامل - ( مطبوعہ انوار احمدی پریس ) \*  
نوٹ - حمیری کے ساتھ سریشی کا مطالعہ ضروری ہی \*

(۲) نظم -

( تصائد ) رنات الطرب من اغانی العرب ( انوار احمدی پریس ) \*  
حماسہ باب الحماسہ والمہاثی - سبعہ معلقہ \*  
نوٹ - حماسہ کے ساتھ قبریزی کا مطالعہ ضروری ہی \*

(۳) معانی -

\* ہایتہ الایجار امام رازی و نقد الشعر بن قدامہ مرتبہ سید علی زینی -  
( مطبوعہ انوار المطابع لکھنؤ ) \*

(۴) تاریخ عام ادب -

\* تاریخ آداب اللغة العربیہ - ( مطبوعہ انوار احمدی پریس الہ آباد ) \*  
مقدمہ ابن خلدون از فصل فی العلم و التعليم تا ختم فصل بعد حذف -  
( ۱ ) عام اسرار الحروف - ( ۲ ) من فروع علم السیماء عندہم -  
( ۳ ) اللام علی استخراج نسبۃ الاوزان - ( ۴ ) الطب الروحانی -  
( ۵ ) الانفعال الروحانی \*

ادب العرب حصہ اول مرتبہ ڈاکٹر زبید احمد لکچرار الہ آباد یونیورسٹی -

(۵) انشاء عربی \*

(۶) انگریزی -

ترجمہ انگریزی سے اردو اور بالعکس - معیار اس صوبہ کے امتحان  
ہائی اسکول اسکالرشپ کی انگریزی پرچہ کے برابر ہوگا \*

## دینیات اسلام

۱ - تفسیر -

( ۱ ) سنی - بیضاوی بعد بقرة کامل اتقان لسیوطی بعد حذف انواع  
۳ و ۸ و ۹ و ۱۴ و ۱۵ و ۲۳ تا ۳۰ و ۳۸ و ۴۷ \*

( ب ) شیعہ - جامع البیواجم بعد بقرة کامل \*

### امتحان فاضل (عربی)

امیدواران درجہ فاضل کا امتحان ذیل کے کسی ایک شعبہ میں ہوگا۔

( ۱ ) عربی علم ادب -

( ب ) دینیات اسلام -

( ج ) طب یونانی \*

ہر شعبہ میں حسب ذیل ۶ پرچے ہونگے اور ہر پرچہ ۳ گھنٹے کا ہوگا۔

( ۱ ) عربی علم ادب

( ۱ ) نثر -

( ۲ ) نظم -

( ۳ ) معانی -

( ۴ ) تاریخ علم ادب -

( ۵ ) انشاء -

( ۶ ) انگریزی \*

( ب ) دینیات اسلام

( ۱ ) اصول حدیث و حدیث -

( ۲ ) حدیث -

( ۳ ) تفسیر -

( ۴ ) فقہ -

( ۵ ) اصول فقہ -

( ۶ ) تاریخ ممل و العقاید \*

( ج ) طب یونانی

حسب فہرست کتب درسیات

نوٹ — ( ۱ ) سوالات عربی میں ہونگے اور اسی زبان میں جواب دینا ہوگا تاوقتیکہ اس کے خلاف ہدایت نہ ہو \*

( ۲ ) سنی اور شیعہ کے واسطہ شعبہ ( ب ) کے امتحان میں علیحدہ پرچے ہونگے \*

( ۵ ) فلسفہ اور منطق -

( ۶ ) تاریخ عرب و انشاء عربی \*

نوٹ — ( ۱ ) سوالات عربی میں ہونگے اور اسی زبان میں جواب دینا ہوگا  
تاوئیکہ اس کے خلاف ہدایت نہ کی جاوے \*

( ۲ ) مضامین بالا ( ۳ ) و ( ۴ ) میں سنی اور شیعہ کے واسطے  
جدگانہ پرچے ہونگے \*

کتاب درسیات

( ۱ ) عربی علم ادب —

الانوار المنتخبہ من الریاض القیروان والقرطیہ (انوار احمدی پریس الہ آباد) \*  
متنبی تا ختم نافیہ را (مطبوعہ دیوبند) \*

( ۲ ) معانی و عروض —

معانی — تلخیص المفتاح —

عروض — علم العروض والقوافی از علم الادب شیخولویس (مطبوعہ انوار  
احمدی پریس الہ آباد) \*

( ۳ ) تفسیر —

( ۱ ) سنی — بیضاوی سورۃ بقرہ -

( ب ) شیعہ — تفسیر کافی سورۃ بقرہ \*

( ۴ ) فقہ و اصول فقہ —

( ۱ ) سنی فقہ — ہدایہ جلد ثالث -

اصول فقہ — نور الانوار —

( ب ) شیعہ فقہ — شرایع تجارت و نکاح و میراث \*

اصول فقہ — معالم الاصول کامل

( ۵ ) فلسفہ و منطق —

فلسفہ الافاضتہ القدسیہ مولوی محمد شریف — متن حکمۃ العین مرتبہ  
مولوی سید علی زینبی ( اورینٹل پبلشنگ ہاؤس لکھنؤ ) و  
علم النفس مطبوعہ انوار المطابع لکھنؤ \*

منطق شمسیہ کامل -

( ۶ ) تاریخ عرب و انشاء —

التخضیری تاریخ الدولین بنی امیہ (مطبوعہ مصر) \*

## کتاب درسیات

( ۱ ) عربی نثر —

نثر - الفخزری لابن طفطقی مطبوعہ انوار المطابع لکھنؤ \*

( ۲ ) عربی فظم —

نظم - ازہار العرب مؤلفہ مولوی محمد صاحب سورتی جامعہ ملیہ  
دہلی \*

( ۳ ) قواعد —

فصول اکبری و کانیہ —

المحو والواضح حصہ ۳ مصطفیٰ امین ( میکمان اینڈ کو کلکتہ ) \*

( ۴ ) تفسیر —

( ۱ ) سنی - جلالین نصف اول - ارض القرآن جلد دوم ( معارف پریس  
اعظمگدھ ) -

( ب ) شیعہ - تفسیر اصفی نصف اول \*

( ۵ ) سنی حدیث و شیعہ حدیث —

( ۱ ) سنی - موطا امام محمد - تخریج الفکر ( متن ) -

( ب ) شیعہ - جامع الاخبار کامل \*

( ۶ ) فقہ —

( ۱ ) سنی - شرح وقایہ اولین و تسہیل الفرائض سید علی ( پٹنہ  
( مطبوعہ انوار المطابع لکھنؤ ) -

( ب ) شیعہ - مختصر نافع کامل \*

( ۷ ) منطق —

مقالات و شرح تہذیب تصورات \*

امتحان عالم ( عربی )

حسب ذیل ۶ پرچے ہونگے اور ہر پرچہ ۲ گھنٹے کا ہوگا -

( ۱ ) عربی علم ادب -

( ۲ ) معانی و عروض -

( ۳ ) تفسیر -

( ۴ ) فقہ و اصول فقہ -

۴ — فارسی انشاء —

ایک مضمون کم از کم ۳ صفحہ میں لکھنا ہوگا \*

ابتدائی عربی و قواعد —

منجانی الادب ( انتخاب انوار احمدی پریس الہ آباد ) \*

اساس عربی ( کتابستان الہ آباد ) \*

۵ — تاریخ ادبیات فارسی —

شعرالعجم کامل ( ۵ حصہ ) \*

۶ — تاریخ ہند —

اقبال نامہ جہانگیری ( مطبوعہ رام پال اگروالا الہ آباد ) —

انتخاب آئین اکبری ( مولوی محمد رفیع لالہ کامتا پشاور چوک  
الہ آباد ) \*

تاریخ ایران — از مالک حصہ اول \*

۷ — فلسفہ عملی و نظری —

رموز حکمت از مولوی محمد شریف ( مطبوعہ اوریئنٹل پبلشنگ  
ہاؤس لکھنؤ ) \*

## امتحان — مولوی ( عربی )

حسب ذیل ۷ پرچے ہونگے اور ہر پرچہ ۳ گھنٹے کا ہوگا —

( ۱ ) عربی نثر —

( ۲ ) عربی نظم —

( ۳ ) قواعد —

( ۴ ) تفسیر —

( ۵ ) ( سنی ) حدیث — ( شیعہ ) علم کلام —

( ۶ ) فقہ —

( ۷ ) منطق \*

نوٹ — مضامین بالا ( ۴ ) — ( ۵ ) — ( ۶ ) میں سنی اور شیعہ کے واسطے

جداگانہ پرچے ہونگے \*

۷ — عربی قواعد و عربی ادب —

- عربی قواعد - دروس القواعد از مولوی عبد السلام (رام دیال اگروالا الہ آباد) \*
- عربی ادب - دروس الادب مصنفہ سید سلیمان ندوی (معارف پریس  
اعظم گڑھ) \*

امتحان کامل — (فارسی)

حسب ذیل ۷ پرچے ہونگے - ہر پرچہ ۳ گھنٹے کا ہوگا۔

( ۱ ) فارسی نثر -

( ۲ ) فارسی نظام -

( ۳ ) فارسی قواعد و معانی و بلاغت و عروض -

( ۴ ) فارسی انشاء و ابتدائی عربی -

( ۵ ) فلسفہ عملی و نظری -

( ۶ ) تاریخ فارسی ادب -

( ۷ ) تاریخ ایران و ہند \*

نوٹ — سوالات فارسی میں ہونگے اور طلبہ کو اسی زبان میں جواب دینا  
ہوگا تو نوبتیکہ اُس کے خلاف ہدایت نہ ہو \*

کتاب درسیات

۱ — فارسی نثر —

انشاء ابوالفضل دفتر اول \*

ہمایوں نامہ - گلبدن بیگم (انوار المطابع لکھنؤ) \*

سیاست نامہ نظام الماک طوسی (لالہ رام نرائین لال کٹرہ الہ آباد) \*

چواغ فارسی (انوار احمدی پریس الہ آباد) \*

۲ — فارسی نظم —

مثنوی مولانا روم دفتر اول از اول تا ابتدا تفسیر قول حکیم سنائی \*

انتخاب تصائد خاقانی (انوار المطابع لکھنؤ) \*

قصاید سلمان ساوجی مع مقدمہ مرتبہ مولوی محمد رفیع

(لالہ کامتا پرشاد چوگ الہ آباد) \*

ریاض فارسی (انوار المطابع لکھنؤ) \*

۳ — فارسی قواعد و بلاغت و عروض —

فارسی قواعد - مخزن القوائد فایق (لالہ رام نرائین لال کٹرہ الہ آباد) \*

بلاغت - حدائق البلاغت \*

عروض - معیار الاشعار طوسی \*

## ۳۔ (الف) فارسی نثر —

مصباح فارسی (مطبوعہ انوار احمدی پریس الہ آباد) \*  
رقایع عالمگیر از چودہری نبی احمد (مطبوعہ انسٹیٹیوٹ  
پریس علیگڑھ) \*

## (ب) انشاء —

مختصر مضمون ادبیات فارسی کے متعلق صناد برعجم ناصری  
(مطبوعہ رام دیال اگروالا الہ آباد) \*

## ۴۔ (الف) فارسی نظم —

مثنوی سحر حلال اہلی شیرازی (مرتبہ مولوی قدرت اللہ بیگ  
انوار المطابع لکھنؤ) \*  
تصائد عرفی، تصائد تاآنی، غزلیات نظیری (انوار المطابع  
لکھنؤ) \*

## (ب) فارسی معانی و بلاغت و قواعد —

معانی - علم المعانی مرتبہ مولوی محمد رفیع (مطبوعہ رام دیال  
اگروالا الہ آباد) \*  
قواعد زبدۃ القواعد مرتبہ مولوی قدرت اللہ بیگ (ادریٹنٹل  
پبلشنگ ہاؤس لکھنؤ) \*

## ۵۔ (الف) تاریخ ہند —

از سید ہاشمی ہوائے درجہ ہشتم ممالک نظام (انجمن ترقی  
اُردو حیدرآباد دکن) \*

## (ب) جغرافیہ —

جغرافیہ عام دنیا (رام دیال اگروالا الہ آباد) \*

## ۶۔ (الف) حساب —

مبادی الحساب ہوائے منشی (ادریٹنٹل پبلشنگ ہاؤس لکھنؤ) \*

## (ب) جبر و مقابہ —

نامسارات سادۃ الجبرا ہوائے ورنائیولر (مطبوعہ اگروالا  
پریس شیوچرن لال روتہ الہ آباد) \*

## (ج) ہندسہ مقالہ اول —

اقلیم اُردو ہوائے ورنائیولر فائینل (مطبوعہ رام دیال اگروالا  
الہ آباد) \*

( الف ) ضمیمہ

فصائب تعلیم امتکانات فارسی و عربی

امتدیان — منشی ( فارسی )

حسب ذیل ۷ پرچے ہونگے — ہر پرچہ ۳ گھنٹے کا ہوگا —

( ۱ ) اردو نثر و انشاء —

( ۲ ) اردو نظم و قواعد —

( ۳ ) فارسی نثر و انشاء —

( ۴ ) فارسی نظم و قواعد و معانی و عروض —

( ۵ ) تاریخ ہند و جغرافیہ عام —

( ۶ ) ریاضی —

( ۷ ) عربی قواعد و ابتدائی عربی \*

کتاب درسیات

۱ — ( الف ) اردو نثر —

باغ و بہار میر امن مع مقدمہ ( مطبوعہ انجمن ترقی اردو

حیدرآباد دکن یادگار غالب ( مطبوعہ رامدیال اگروالا —

الہ آباد ) \*

ایام عرب حصہ اول عبدالحلیم شرر ( مطبوعہ دلگداز پریس

لکھنؤ ) \*

( ب ) انشاء —

مختصر مضمون تاریخ ادب اردو شعرالہند عبدالسلام ( معارف

پریس اعظمگدھ ) —

۲ — ( الف ) اردو نظم —

بزم قدیم ( مطبوعہ انوارالطابع ۳۷ امین آباد پارک لکھنؤ ) \*

انتخاب میر و غالب مع مقدمہ مولوی محمد رفیع ( مطبوعہ

رامدیال اگروالا — الہ آباد ) \*

نفسات الہند مع مقدمہ مولوی محمد شریف ( انوارالطابع

لکھنؤ ) \*

( ب ) قواعد — اساس اردو ( انوار احمدی پریس الہ آباد ) \*

سیکند ڈویژن — جو امیدوار ۲۵ فیصدی مجموعی نمبر حاصل کرے لیکن  
۶۰ فیصدی سے کم ہو \*

تہہ ڈویژن — جو امیدوار مجموعی نمبروں میں ۲۵ فیصدی سے کم حاصل کرے \*

۱۳ — کامیاب امیدواروں کو اسناد رجسٹرار صاحب کے مہر و دستخط سے دی  
جاوینگی اور ان کے نام ممالک متحدہ کے گورنمنٹ گزٹ میں شائع ہونگے \*

۱۴ — جس شخص کو اپنی سند کی نقل کی ضرورت ہو وہ اصلتا اپنے ضلع  
کے قیٹی انسپیکٹر مدارس سے درخواست کرے — اس کی درخواست تحریری  
ہونی چاہیئے اور اس کو چاہیئے کہ قیٹی انسپیکٹر کو مطمئن کرے کہ وہی شخص  
ہی جس کو اصلی سند عطا ہوئی تھی اور یہ کہ وہ دراصل گم یا ضائع ہو گئی  
ہی — اگر قیٹی انسپیکٹر کو پیش کردہ شہادتوں سے اطمینان ہو جاوے تو وہ حسب  
شرح ذیل فیس وصول کر کے داخل خزانہ سرکاری کریگا اور درخواست کو مع اپنی  
رپورٹ اور رسید چالان کے رجسٹرار صاحب کے پاس روانہ کر دینگا — تب سند کی  
نقل قیٹی انسپیکٹر کے پاس بغرض حوالگی سائل بغیر کسی مزید صرفہ کے بھیج  
دی جاوینگی —

#### شرح فیس نقل اسناد

روپیہ آنہ پائی

نقل ایسے اسناد کی جن کے لچرا کو ایک سال سے زیادہ نہ گذرا ہو ۸ ۱ \*

ایضا ایضا دو سال سے ایضا .... ۲ \*

ایضا ایضا چار سال سے ایضا .... ۳ \*

ایضا ایضا چار سال سے زیادہ گذرا ہو.... ۵ \*

۱۵ — اگر قیٹی انسپیکٹر سائل کی پیش کردہ شہادت سے مطمئن نہ ہو تو  
اس کو معاملہ مع اپنی رپورٹ کے رجسٹرار صاحب کے پاس بغرض صدور حکم  
روانہ کر دینا چاہیئے \*

۱۶ — جس قدر فیس نقول اسناد کی وصول کی جاوے وہ سب خزانہ میں  
بم ”فیس امتحانات صوبہ“ داخل کر دینی چاہیئے \*

( دستخط ) ایچ آر ہیپ — اے اے

قائم مقام ڈائریکٹر سرشتہ تعلیم — ممالک متحدہ

الہ آباد — مورخہ ۷ مئی سنہ ۱۹۳۲ء

میں بغیر عالم کا امتحان پاس کیئے ہوئے شریک ہو سکتے ہیں اور جن امیدواروں نے منشی فاضل پنجاب یا مدراس یونیورسٹی یا دبیر کامل لکھنؤ یونیورسٹی کا امتحان پاس کیا ہے وہ امتحان کامل میں بغیر منشی کا امتحان پاس کیئے ہوئے شریک ہو سکتے ہیں۔ لیکن ایسے امیدواروں کے لیئے یہ ضروری ہے کہ وہ اپنی درخواست دہنی انسپیکٹر مدارس ضلع کی تصدیق سے دفتر ہذا کو روانہ کریں \*

۹ — جن امیدواروں نے فاضل سابق کا امتحان پاس کیا ہے وہ فاضل حال کے شعبہ (الف) (عربی علم ادب) کے امتحان کے صرف پرچہ انگریزی میں شریک ہو سکتے ہیں۔ کامیاب امیدواروں کی قابلیت فاضل حال کے امتحان کے سند یافتوں کے برابر سمجھی جاوے گی \*

۱۰ — درخواست کا فارم رجسٹرار صاحب کو درخواست دینے پر ملیگا اور باضابطہ خانہ پڑی کے بعد یکم اگست یا اس کے قبل دفتر رجسٹرار صاحب میں پہنچ جانا چاہئے اور بعد منظوری درخواست داخلہ فیس، مندرجہ قاعدہ نمبر ۱۱ داخل خزانہ سرکاری کر کے رسید چالان روانہ کر دینی چاہئے تاہم دفتر رجسٹرار صاحب میں ۳۱ اکتوبر یا اس کے قبل پہنچ جائے۔ بعد انقضاء میعاد مقررہ بالا درخواست یا رسید خزانہ بابت فیس قبول نہ کی جاوے گی \*

پرائیویٹ امیدواروں کو اپنی درخواست جس ضلع میں وہ رہتے ہوں وہاں کے دہنی انسپیکٹر مدارس کے توسط سے رجسٹرار صاحب کے دفتر میں یکم اگست یا اس کے قبل پہنچنا چاہئے اور بعد منظوری درخواست فیس امتحان داخل خزانہ کر کے رسید چالان دفتر رجسٹرار صاحب کو ۳۱ اکتوبر یا اس کے قبل روانہ کریں \*

۱۱ — شرح فیس جو ہر درجہ کے امیدواروں (بشمول پرائیویٹ امیدواروں) سے لی جاوے گی حسب ذیل ہوگی —

۳ روپیہ	....	....	امتحان منشی کے واسطے ....
۱۰ روپیہ	....	....	امتحان کامل کے واسطے ....
۶ روپیہ	....	....	امتحان مولوی کے واسطے ....
۸ روپیہ	....	....	امتحان عالم کے واسطے ....
۱۰ روپیہ	....	....	امتحان فاضل کے واسطے ....

ان امیدواروں سے جنہوں نے فاضل سابق کا امتحان پاس کیا ہے اور فاضل حال کے صرف انگریزی میں شریک ہونا چاہتے ہیں ۳ روپیہ

۱۲ — امیدواروں کو کم از کم ۳۰ فیصدی نمبر ہر پرچہ میں حاصل کرنا ہونگے۔ کامیاب امیدوار حسب ذیل درجوں پر منقسم ہونگے —

فہرست درجوں — جو امیدوار ۶۰ فیصدی یا ۶۰ فیصدی سے زیادہ نمبر سمجھواری نمبروں میں حاصل کرے \*

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